ANDALEX RESOURCES, INC.
CENTENNIAL PROJECT
007/019

(TOWER MINE)

SECOND RESPONSE TO MID-TERM REVIEW

TASK #3409

SUBMITTED: January 28, 2010

*****First Submittal (Task 3276): October 1, 2009*****

0002

C007/0019 Incoming #3465 R

ANDALEX RESOURCES, INC.

P.O. BOX 910
EAST CARBON, UTAH 84520
PHONE (435) 888-4000
FAX (435) 888-4002

COPY

Utah Division of Oil, Gas & Mining
Coal Program
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

January 20, 2010

Attn: Daron Haddock
Permit Supervisor

RE: Andalex Resources, Inc., C/007/019
Tower (Centennial) Mine
Second Response to Mid-term Review
Task 3406

Dear Mr. Haddock:

Enclosed are six (6 ea.) copies of the second response to the mid-term review, Task 3406. As you are aware, the mine is presently in temporary idle status due to economic and marketing conditions, and may resume production at such time as economic conditions improve. The existing GVH installations are maintained as a vital and integral component of the overall mine ventilation system, necessary for the safety of the underground workforce, and will remain in a stand-by status until such time as the mine resumes operation.

Should you have any questions regarding this issue, please feel free to contact me

Sincerely,

David Shaver
Resident Agent

File in:
☐ Confidential
☒ Shelf
☐ Expandable
Refer to Record No 0002 Date 01202010
In C/0070019, 2010, Incoming
For additional information

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JAN 28 2010
DIV. OF OIL, GAS & MINING

Form DOGM - C1 (Last Revised January 21, 2010)

File Folder # 3

APPLICATION FOR PERMIT PROCESSING COPY

Permit Change ☐	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐

Permit Number: 007/019

Title of Proposal: Second response to mid-term review, Task 3406

Mine: Centennial Project

Permittee: **Andalex Resources, Inc.**

Description, include reason for application and timing required to implement:.

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.*

☐ Yes	☒ No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres ☐ increase ☐ decrease.
☐ Yes	☒ No	2. Is the application submitted as a result of a Division Order?
☐ Yes	☒ No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes	☒ No	4. Does application include operations in hydrologic basins other than as currently approved?
☐ Yes	☒ No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes	☒ No	6. Does the application require or include public notice/publication?
☐ Yes	☒ No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes	☒ No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes	☒ No	9. Is the application submitted as a result of a Violation?
☐ Yes	☒ No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
☐ Yes	☒ No	11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes	☒ No	12. Does the application require or include underground design or mine sequence and timing?
☐ Yes	☒ No	13. Does the application require or include collection and reporting of any baseline information?
☐ Yes	☒ No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	☒ No	15. Does application require or include soil removal, storage or placement?
☐ Yes	☒ No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	☒ No	17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes	☒ No	18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes	☒ No	19. Does the application require or include certified designs, maps, or calculations?
☐ Yes	☒ No	20. Does the application require or include subsidence control or monitoring?
☐ Yes	☒ No	21. Have reclamation costs for bonding been provided for?
☐ Yes	☒ No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes	☒ No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

☐ **Attach _3_ complete copies of the application.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations therein. (R645-301-123)

Signed - Name - Position - Date 1/14/10 agent

Subscribed and sworn to before me this 21st day of January, 2010.

Notary Public

My Commission Expires: 03.27.13

Attest: STATE OF Utah
COUNTY OF Carbon

Notary Public
LINDA KERNS
Commission #578211
My Commission Expires
March 27, 2013
State of Utah

RECEIVED
JAN 28 2010
DIV. OF OIL, GAS & MINING

Received by Oil, Gas & Mining

ASSIGNED TRACKING NUMBER

Form DOGM - C2 (Last Revised 6/93)

File Folder # 3

Application for Permit Processing
Detailed Schedule of Changes to the MRP

COPY

Title of Application: Second response to mid-term review, Task 3406	Permit Number: 007/019
	Mine: Centennial Project
	Permittee: Andalex Resources, Inc

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☒ REPLACE	☐ REMOVE	Chapter 1 text : all
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	Chapter 5 text : pgs 5-123 thru 5-136
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Note: additional additions and
☐ ADD	☐ REPLACE	☐ REMOVE	replacements are described on
☐ ADD	☐ REPLACE	☐ REMOVE	C2 submitted previously as Task 3276
☐ ADD	☐ REPLACE	☐ REMOVE	
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☐ ADD	☐ REPLACE	☐ REMOVE	

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

RECEIVED
JAN 28 2010
DIV. OF OIL, GAS & MINING

ANDALEX
RESOURCES, INC.

P.O. BOX 910
EAST CARBON, UTAH 84520
PHONE (435) 888-4000
FAX (435) 888-4002

Utah Division of Oil, Gas & Mining
Coal Program
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

October 1, 2009

Attn: Daron Haddock
Permit Supervisor

RE: Andalex Resources, Inc., C/007/019
Tower (Centennial) Mine
Response to Mid-term Review
Task 3276

Dear Mr. Haddock:

Enclosed are six (6 ea.) copies of the response to the mid-term review, Task 3276. In reviewing this response please note the following:

Most of the changes involve amendments to Appendix X, which deals strictly with the Gob Gas Vent Holes ("GVH"). Since the time the review letter was initially submitted, we have begun reclamation on two of the GVH sites, namely GVH 1 and GVH 5. We expect full reclamation to be complete within two weeks, by mid-October. All other GVH sites are currently under the commercial terms of the operating agreement with Oso Energy Resources Corp. which has existing gas rights and surface agreements with the area landowners.

Changes to the main body of the MRP outside Appendix X are limited to routine updates to the Ownership & Control and the Violation Information appendices.

Included in this submittal, although not an amendment to the MRP, is copies of various correspondence with MSHA and BLM regarding the temporarily idle status of the mine.

Also, as a mater of clarification, please note that Musk Thistle (Carduus nutans) is presently being removed from all GVH sites and will be disposed of at a suitable location, such as ECDC.

Also of note, the water monitoring well (Well #1) at the Tower minesite has been totally cleaned out and a new pump has been installed. The well is now again functioning propoerly as a ground water monitoring station, and samples were recently taken as part of the 3rd quarter monitoring.

Should you have any questions regarding this issue, please feel free to contact me

Sincerely,

David Shaver
Resident Agent

Form DOGM - C1 (Last Revised September 30, 2009) File Folder f

APPLICATION FOR PERMIT PROCESSING

Permit Change ☐	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐

Permit Number: 007/019

Title of Proposal: Response to mid-term review, Task 3276

Mine: Centennial Project

Permittee: **Andalex Resources, Inc.**

Description, include reason for application and timing required to implement:.

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.*

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☐ **Attach _3_ complete copies of the application.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)

Signed - Name - Position - Date

Subscribed and sworn to before me this 1st day of October, 2009

Notary Public

My Commission Expires: May 16, 2012

Attest: STATE OF Utah COUNTY OF Carbon

MARY V. KAVA
NOTARY PUBLIC • STATE of UTAH
COMMISSION # 574280
COMM. EXP. 05-16-2012

Received by Oil, Gas & Mining

RECEIVED

JAN 28 2010

DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

Form DOGM - C2 (Last Revised 6/93)

File Folder #

Application for Permit Processing
Detailed Schedule of Changes to the MRP

Title of Application: Response to mid-term review, Task 3276

Permit Number: 007/019

Mine: Centennial Project

Permittee: Andalex Resources, Inc

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☒ REPLACE	☐ REMOVE	App 1 - Part 1 Ownership & Control
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	App 1 - Part 3 Violation Information
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix X (GVH):
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	All text in Chapter 1, 2, 3, 4, 5, 7, 8
☐ ADD	☐ REPLACE	☐ REMOVE	
☒ ADD	☐ REPLACE	☐ REMOVE	Attachment 1-1 (OSO agreement)
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	Figure 1-1 (GVH location map)
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

INFORMATION REGARDING TEMPORARY IDLE STATUS OF CENTENNIAL MINES (a.k.a., TOWER MINE)

NOTE: This information is provided as part of the mid-term review and is not part of the Mining and Reclamation Plan

ANDALEX
RESOURCES, INC.

P.O. BOX 910
EAST CARBON, UTAH 84520
PHONE (435) 888-4000
FAX (435) 888-4002

M. Cheryl Heying
Director
Utah Division of Air Quality
Emissions Inventory
150 North 1950 West
Salt Lake City, Utah 84116

December 17, 2009

Re: Andalex Resources Incorporated
Centennial Minesite
Notice of Temporary Idle Status

Dear Ms. Heying:

Please note that the Centennial Mine, operating under Approval Order DAQE-997-96 was temporarily idled for economic reasons on June 11, 2008. The mine may resume production as soon economic conditions become more favorable.

Sincerely,

David Shaver
Resident Agent

UtahAmerican Energy, Inc.

6750 North Airport Road, P. O. Box 910, East Carbon, Utah
84520 Phone: (435) 637-5385
Fax: (435) 637-8860

November 10, 2008

Mr. Allyn C. Davis, District Manager
Coal Mine Safety and Health
P.O. Box 25367
Denver, Colorado 80225-0367

RE: Aberdeen Mine
MSHA ID Number 42-02028
Final Maps

Dear Mr. Davis:

Please find enclosed three (3) copies of the Final Map in accordance with 30 CFR Part 75.1204 for the aforereferenced mine. This mine is being temporarily idled at this time.

If you require additional information, feel free to call me at (435) 888-4016 or contact us at the address listed above.

Sincerely,

David W. Hibbs

David W. Hibbs
Director, Engineering

UtahAmerican Energy, Inc.

6750 North Airport Road, P. O. Box 910, East Carbon, Utah
84520 Phone: (435) 637-5385
Fax: (435) 637-8860

November 10, 2008

Mr. Allyn C. Davis, District Manager
Coal Mine Safety and Health
P.O. Box 25367
Denver, Colorado 80225-0367

RE: Pinnacle Mine
MSHA ID Number 42-1474
Final Maps

Dear Mr. Davis:

Please find enclosed three (3) copies of the Final Map in accordance with 30 CFR Part 75.1204 for the aforereferenced mine. This mine is being temporarily idled at this time.

If you require additional information, feel free to call me at (435) 888-4016 or contact us at the address listed above.

Sincerely,

David W. Hibbs

David W. Hibbs
Director, Engineering

UtahAmerican Energy, Inc.

6750 North Airport Road, P. O. Box 902, Price, Utah 84501
Phone: (435) 637-5385
Fax: (435) 637-8860

COPY

CONFIDENTIAL

Jim Kohler
Chief, Solid Minerals Branch
Bureau of Land Management
Utah State Office
P.O. Box 41155
Salt Lake City, Utah 84145-0155

RE: Temporary Closure – Sealing
Aberdeen Mine / Pinnacle Mine

Dear Mr. Kohler:

This letter is being written to give a more detailed explanation of the plan to seal the Aberdeen/Pinnacle Mines. This response is being sent in regard to a recent email from Steve Falk.

Mr. Falk raised issue concerning the adequacy of the shaft cap to protect public safety. This letter is intended to address Mr. Falk's concerns. The shaft cap design will be certified by a professional engineer. A structural analysis was performed on the shaft cap; this analysis was performed to determine the point load that could be applied at the approximate center of the cap. The maximum point load was found to be approximately 15 tons for a service factor of one (1). This point load is in addition to the weight of the steel and concrete used in construction of the cap.

A chain link fence will be constructed a minimum of 50' from the shaft to prevent unauthorized access. Also, security at the site will be provided around the clock. In addition, the minimum height from the surrounding ground surface is 16" and the cap is an additional 8". A height of 24" would have to be cleared for a vehicle to get on top of the shaft cap.

The 3" PVC pipe is being installed in accordance with 30 CFR Part 75.1711-1. The 10" pipe will be extended five (5) feet into the shaft for the purpose of extracting methane if methane build up becomes an issue or to pump inerting gas into the shaft at the time of cap removal if necessary.

If you require additional information, feel free to call me at (435) 888-4016 or contact us at the address listed above.

Sincerely,

David W. Hibbs

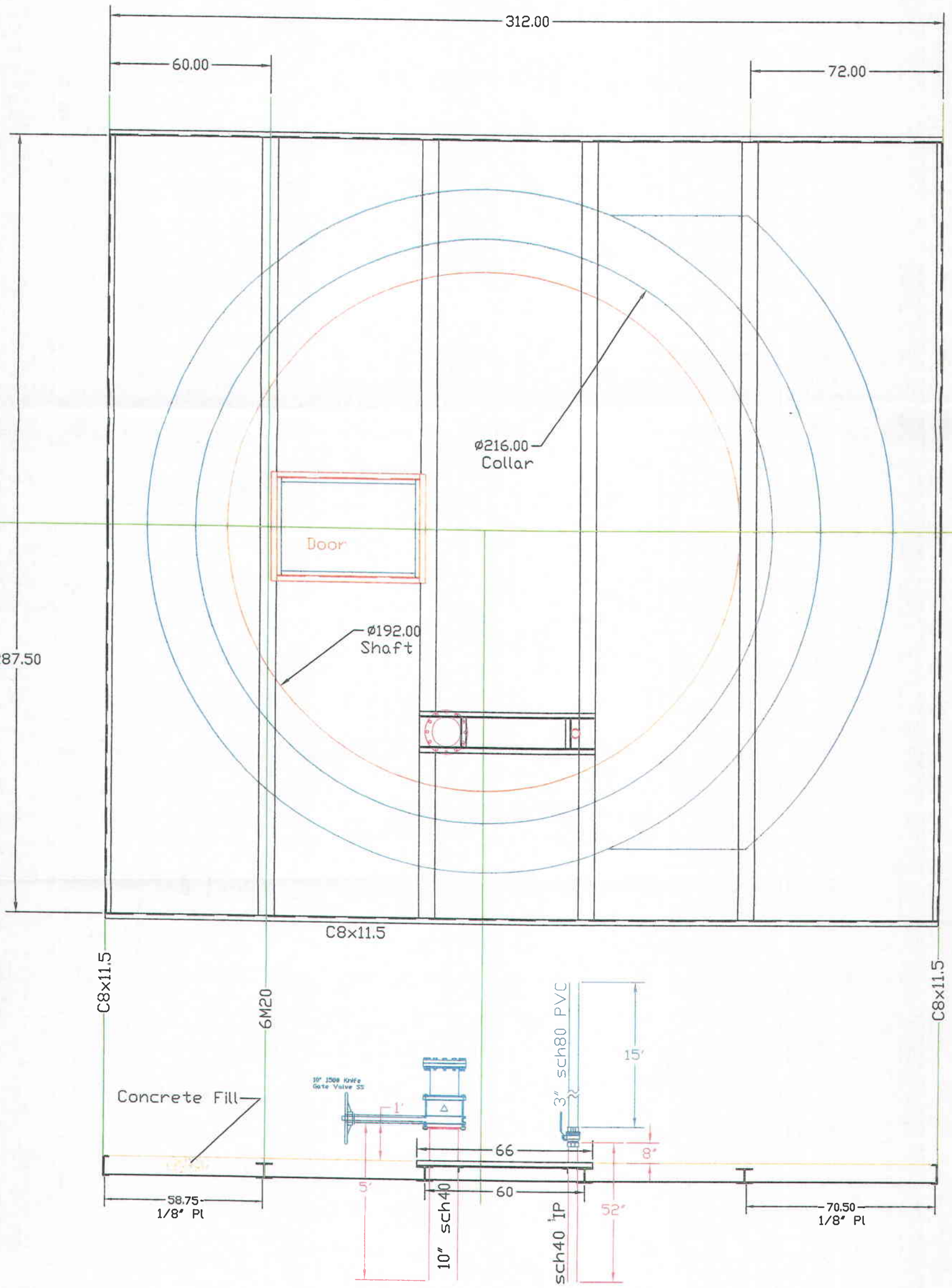
David W. Hibbs
Director, Engineering

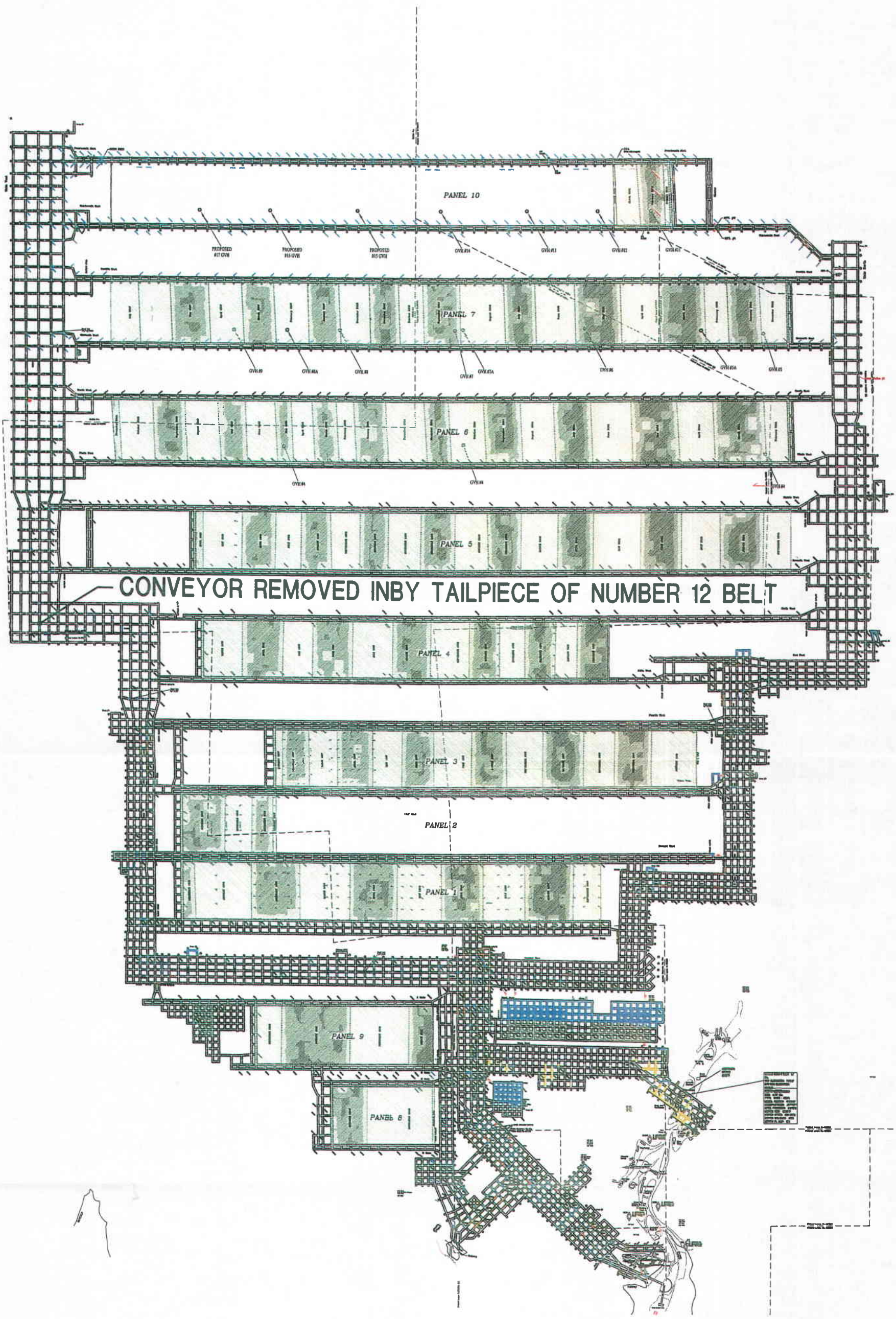
CC: Steve Falk
Bureau of Land Management
Price Field Office
125 South 600 West
Price, Utah 84501

Overview
Plate 3

Notes:
Shaft & Collar are shown for reference only.
Cap to sit atop poured concrete pad.
1/8" sheet metal to be welded to inside bottom flanges of Channel and WF.
Suitable lifting ears to be attached to allow frame to be set over shaft.
Frame to be filled with concrete after it is set over shaft.
Valves & Pipework (Blue) to be installed after cap is set & poured.

8x11.5 Channel (100') = 1150#
6M20 (96') = 1920#
1/8" Pl 4 x 5x24 = 2448#
1/8" Pl 1 x 6x24 = 735#
Misc pipe & steel = 517#
15 yd^3 Concrete = 48600#
Total wt = 27.7 tons





UtahAmerican Energy, Inc.

794 NORTH "C" CANYON ROAD, EAST CARBON, UTAH 84520
P.O. BOX 1077, PRICE, UTAH 84501
PHONE: (435) 888-4000 FAX: (435) 888-4002

CONVEYOR REMOVAL MAP

ABERDEEN MINE
TOWER DIVISION
6750 AIRPORT ROAD
PRICE, UTAH 84501

MSHA MINE ID #42-02028

DRAWN BY: PJ	SCALE: NONE
APPROVED BY: DH	DATE: 11 JUNE 2008
SHEET:	1 of 1

UtahAmerican Energy, Inc. 6750 North Airport Road, P. O. Box 902, Price, Utah 84501
Phone: (435) 637-5385
Fax: (435) 637-8860

CONFIDENTIAL

June 11, 2008

Jim Kohler
Chief, Solid Minerals Branch
Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

RE: Aberdeen Mine
Modification of Resource and Recovery Protection Plan (R2P2)
Removal of Equipment from the Mine

Dear Mr. Kohler:

Please find enclosed a request for modification to the approved R2P2 for the aforereferenced mine.

Proposed Action

The Aberdeen Mine was recently closed due to unexpected stress conditions on Longwall Panel 10. This proposal is to remove equipment from the mine for the purpose of putting the mine in an idle status.

Background

UtahAmerican Energy, Inc. (UEI) was previously longwall mining in Panel 10 at this mine; unusual stress conditions were encountered on this panel approximately 700' outby the set-up face. These unusual stress conditions made it no longer possible to produce coal from Panel 10 with total confidence in maintaining a safe workplace for the miners.

Panel 10 was operating at a depth of cover that is approximately 2800 feet and would have exceeded 3000' before completing the panel. Panel 10 was developed on coal from Federal coal lease U-79975 and the Mathies Fee Tract. The unusual stress condition encountered in addition to the increased water inflow from a known fracture zone causing

E-MAILED
BLM
06/11/08

concern for providing a safe workplace for the miners. These conditions led to the decision to cease production from Panel 10.

UEI has filed a Lease by Application (LBA) for the area west of the Aberdeen Mine. The area included in the LBA contains coal reserves that are under less cover than Panel 10 and the remaining northern reserves. A request has been made to place the mine in a Temporary Cessation of Coal Severance status. Access to the Western Reserve would be gained by utilization of the Aberdeen Mine portals.

This request is to remove the equipment and conveyor system from the Aberdeen Mine to the tail of #12 Belt. Mining in the western reserves would be begun with the existing conveyor system and evaluations performed to determine the economic viability of a new system. The conveyor system and equipment would remain in place outby the tail of #12 belt. This location was selected due to the proximity with the proposed mining of the LBA in the upper seams. This location also allows the use of any locations outby #12 belt to access the Aberdeen seam. The attachment enclosed with this submittal shows the #12 belt location.

This proposal is to temporarily seal the drifts with non-combustible material and "cap" the existing air shaft with a concrete cap. These devices would be installed to prevent unauthorized access into the mine and to prevent degradation of the mine roof due to exposure to air. The seals would be breeched, ventilation restored, and the mine will be rehabilitated when the development to the western reserves is initiated.

Affected Leases and LMU

The Federal coal leases are affected by the proposed action are U-79975 and a LMU application has been filed for the entire area.

Maximum Economic Recovery (MER)

Panel 10 was the deepest longwall panel being mined and the mine had a history of ground control and methane issues. It has been recognized that mining at these depths and conditions is approaching the limits of existing technology. UEI has been developing equipment for mining at these depths.

It is proposed to continue development of this technology as mining progresses in the lower cover western reserve area. The potential exists to utilize future technology to recover a portion of Panel 10 with the new technology. This would require development of a new set-up face. Therefore, the reserve in Panel 10 should not be considered "lost" at this time.

Recoverable Reserve Base

UEI will be submitting a proposal in the near future to discuss the disposition of the various leases and recoverable tons.

If you require additional information, feel free to call me at (435) 88-4016 or contact us at the address listed above.

Sincerely,

David W. Hibbs

David W. Hibbs
Director, Engineering

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
http://www.blm.gov

TAKE PRIDE IN AMERICA

Reply
2/3/08
DJ

IN REPLY REFER TO:
3482
SL-027304
SL-063058
U-05067-08916
U-010581
UTU-66060
UTU-69600
UTU-79975
(UT-923)

JUN 20 2008

Certified Mail - Return Receipt Requested 7007 0710 0003 0208 2287

Mr. David W. Hibbs
Director, Engineering
UtahAmerican Energy, Inc.
P. O. Box 902
Price, Utah 84501

Re: Minor Modification to the Resource Recovery and Protection Plan (R2P2) and Compliance with Notice and Order, Removal of Equipment, Aberdeen Mine, UtahAmerican Energy Inc.

Dear Mr. Hibbs:

On June 11, 2008, the Bureau of Land Management (BLM) received from UtahAmerican Energy Inc. (UEI), a request to modify the approved R2P2 by idling the subject mine, removing equipment inby the #12 belt tailpiece and temporarily sealing the mine openings. This request follows the "Partial Compliance with Notice and Order" letter from the BLM to UEI dated April 4, 2008, in that BLM approved pulling the longwall equipment off of panel # 10 and ceasing production at the mine. The received request from UEI is another step in an overall temporary mine closure plan. Please note that UEI's other request for the granting of temporary interruption in coal severance, dated May 15, 2008, will be addressed separately.

Affected Leases and Logical Mining Units (LMU): The idling of the mine affects the pending LMU which includes all the leases and properties in the LMU application.

Proposed Plan and Justification: UEI proposes to extract all equipment out of the mine from inby #12 belt tailpiece, located at the last turn of Main West going north down dip. Leaving the conveyor system outby this point will allow better options to access the applied for west coal leases. UEI also proposes to temporarily seal all drifts with block walls and noncombustible material and to cement cap the new fan shaft. Unauthorized access into the mine would be secured and the mine workings protected from long

term degradation. The temporary idling and securing the portal of this mine would allow for time to secure new leases to the west and pursue new technologies and systems to mine at the increasing depths of this property.

Inspection: The conditions at the mine at the time of the submittal of the request for removal of the longwall were inspected by the BLM on March 26, April 3, and May 1, 2008, wherein conditions were witnessed and noted. As equipment is withdrawn from the mine, BLM will have to inspect areas that have been abandoned before they become inaccessible.

Approval and Conditions: The attached approved map is to illustrate longwall panel 10 only and does not show the remaining areas to be mined. The BLM accepts UEI's proposals for idling and securing the mine. UEI's methods for withdrawing equipment and securing the mine openings will provide for protection of the coal resource for future mining while reducing maintenance requirements for a non-producing mine. Also, unauthorized entrance to hazardous mine openings will be barred for public safety. BLM authorizes the withdrawal of equipment as set forth in your proposal on the following conditions:

- BLM must be notified in advance before areas are made inaccessible so that inspections can be scheduled and made.
- A drawing/plan of the design for the temporary portal seals must be submitted to the BLM before implementation.
- A disposition of the current Federal leases, including the deep coal reserves and the pending lease modification application (dated 1 September 2006), along with the associated recoverable reserve tonnages by lease must be submitted to the BLM for review and approval within 60 days of the date this letter is received (UEI acknowledges in this proposal of current action on this requirement).
- Mine site security for public safety and protection of the coal reserves will be maintained through the idle period.

Maximum Economic Recovery (MER): Future recovery of Federal coal has been compromised by the removal of the longwall from the mine and additional reserves could be compromised by this proposed plan to fully but temporarily idle the mine. However MER can be achieved under this proposal by payment of royalties on coal tons lost, including those due to removal of the longwall from longwall Panel 10 and the resulting need to provide a barrier before longwall mining can resume at a later date.

UEI is required to provide a projection within 30 days, for BLM approval, of the tons of coal that will now have to be left in place upon resumption of mining for longwall Panel 10, or all ongoing work to remove equipment from the mine must stop at the end of the 30 days. UEI is required to commit in writing to pay royalty on the tons lost in longwall Panel 10 at the royalty rate and market price in effect at the time of actual mining or relinquishment of lease(s). A copy of UEI's written commitment will be provided to the Mineral Management Service (MMS).

At the resumption of mining and recovery of the coal in longwall Panel 10 and throughout the Federal leases of the mine, royalties will be due for the loss of coal by stopping mining as proposed. Further, the royalty due for projected tons lost in longwall Panel 10 will be adjusted to reflect actual tons lost.

National Environmental Policy Act (NEPA):
This approval of a minor modification to an approved R2P2 of an existing underground coal mine is Categorically Excluded from NEPA analysis, as explained in the Department Manual (5 DM Part 516 11.5 (F) (8)).

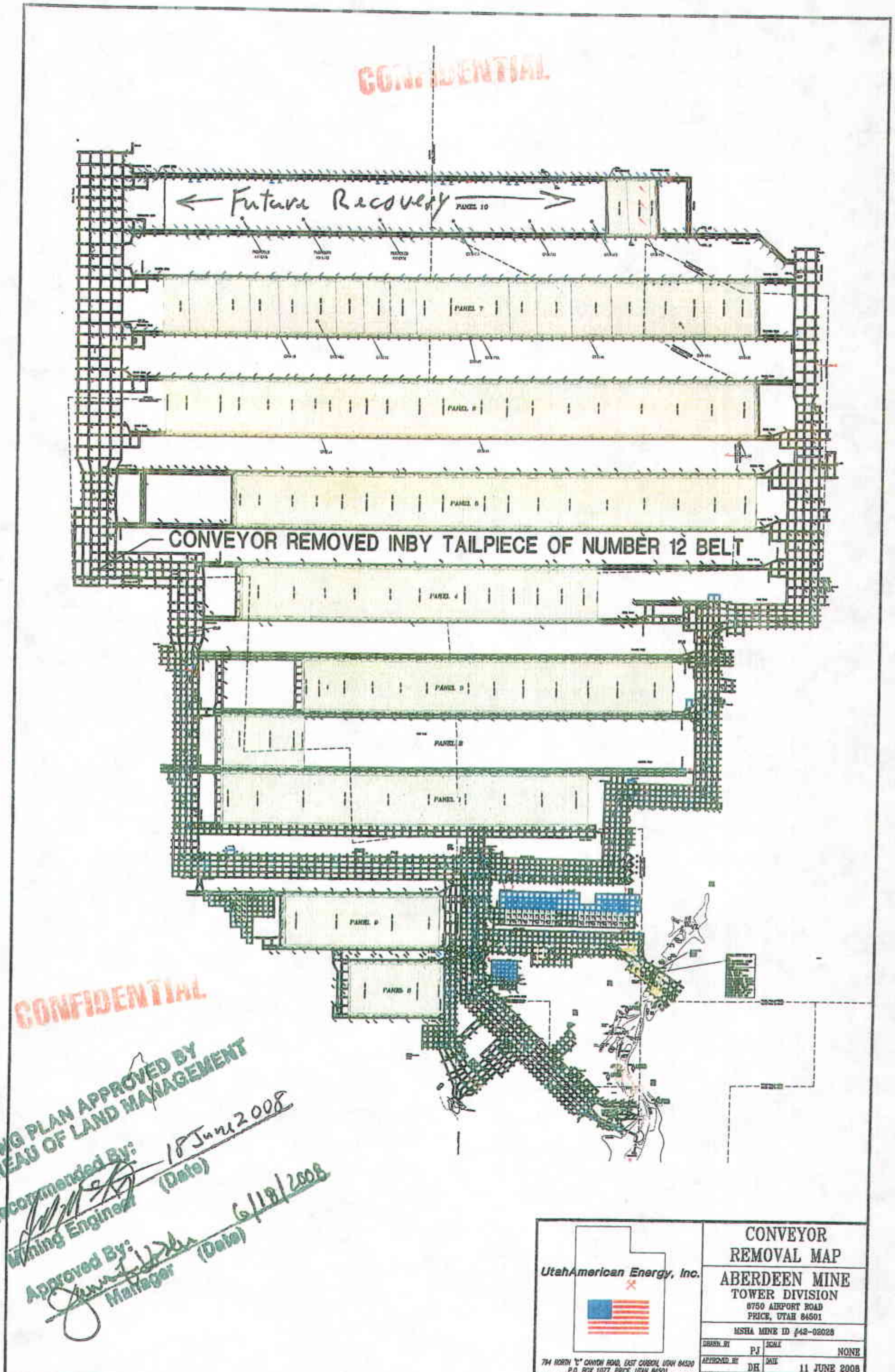
The BLM has determined that this R2P2 modification complies with the Mineral Leasing Act of 1920, as amended, the regulations at 43 CFR 3480, and the lease terms and conditions. Subject to the conditions in this letter, UEI is authorized to begin equipment removal and securing the Aberdeen Mine in a temporary idle status. A copy of the approved mine map is attached. If you have any questions, please contact Stephen Falk at the Price Field Office (435-636-3605) and Jeff McKenzie of my staff at 801-539-4038.

Sincerely,

James F. Kohler
Chief, Solid Minerals Branch

Attachment: Approved Mine Map

CC: Price Field Office
Mineral Management Service
DOGM


CONFIDENTIAL
← Future Recovery →
PANEL 10
PANEL 7
PANEL 6
PANEL 5
CONVEYOR REMOVED INBY TAILPIECE OF NUMBER 12 BELT
PANEL 4
PANEL 3
PANEL 2
PANEL 1
PANEL 9
PANEL 8
CONFIDENTIAL
MINING PLAN APPROVED BY
BUREAU OF LAND MANAGEMENT
Recommended By: 18 June 2008
Mining Engineer (Date)
Approved By: 6/18/2008
Manager (Date)
UtahAmerican Energy, Inc.
794 NORTH "C" CANYON ROAD, EAST CARBON, UTAH 84520
P.O. BOX 1077, PRICE, UTAH 84501
PHONE: (435) 888-4000 FAX: (435) 888-4002
CONVEYOR
REMOVAL MAP
ABERDEEN MINE
TOWER DIVISION
6750 AIRPORT ROAD
PRICE, UTAH 84501
MSHA MINE ID #42-02028
DRAWN BY PJ
SCALE NONE
APPROVED BY DH
DATE 11 JUNE 2008
SHEET 1 of 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE
P.O. BOX 45155
SALT LAKE CITY, UTAH 84145-0155

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL™

7007 0710 0003 0208 2287

US OFFICIAL MAIL
$300 Penalty
For Private Use

016H26601217
$ 05.320
06/20/2008
Mailed From 84101
US POSTAGE
Hasler

Mr. David W. Hibbs
Director, Engineering
UtahAmerican Energy, Inc.
P. O. Box 902
Price, Utah 84501

841 D7E 1 608I 01 06/25/08
NOTIFY SENDER OF NEW ADDRESS
:UTAHAMERICAN ENERGY
PO BOX 910
EAST CARBON UT 84520-0910

BC: 84520091010 *0236-10810-20-41

JUL 11 2008

84520@0910
84501@0902 B009

ANDALEX RESOURCES, INC.

CENTENNIAL PROJECT

MINING AND RECLAMATION PLAN

CHAPTER 1, LEGAL

CHAPTER 1, LEGAL

R645-301-100. GENERAL

The Mathis Tract and new Federal Summit Creek Lease Boundary Change is simply an extension of our underground mine workings and will in no way involve any new surface facilities or otherwise have any affect on the surface. It does not involve any new hydrologic basins. Refer to R645-301-200 through R645-301-800 for additional information.

R645-301-110. LEGAL, FINANCIAL, AND COMPLIANCE INFORMATION

Legal, Financial, Compliance and Information

The objective of this chapter is to set forth all relevant information concerning ownership and control of Andalex Resources, Inc., the ownership and control of the property to be affected by mining activities and all other information and documentation required.

Please note that right-of-entry information for all new Leases is included in Appendix J, "Other Approvals". This includes the short form of the Mathis lease recorded at Carbon County.

Compliance Information

a) Suspension and Revocation

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex haven't had a mining permit suspended or revoked within the last five years.

b) Forfeiture of Bond

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex have not forfeited a mining bond or similar security in lieu of bond.

c) History of Violations

Appendix 1, Part 3 contains a listing of all violations received within the last three years prior to the date of this application by Andalex and affiliated companies.

R645-301-111. INTRODUCTION

Overview and Summary of Project

Mining operations at the Pinnacle Mine began in the Gilson Seam on October 3, 1980, according to the Mining and Reclamation Plan approved by the State of Utah, Department of Natural Resources, Division of Oil, Gas, and Mining. The mining began on the Zion's fee lease and extended onto Andalex's federal leases according to federal approval granted in 1982. Andalex also opened the Apex Mine in the Lower Sunnyside Seam late in 1982. Mining commenced in the Aberdeen Mine in the Aberdeen Seam in mid 1988. The coal is classified as High Volatile B bituminous in the Lower Sunnyside and Gilson Seams and as High-volatile A bituminous in the Aberdeen Seam.

The mine plan area is located approximately 10 miles north-northeast of Price, Utah in Carbon County in T12 and 13S and R10 and 11E (See Figure 1-2. The mining property contains approximately 6528.83 acres. Of this, 1081.5 acres are fee surface and coal leased from the following: Zion Security Corporation (200 acres), Mathis (640 acres), Sunedco (200 acres), Andalex Resources fee (40 acres), and David Cave (1.5 acres). An additional 5435.88 acres are federal leases, consisting of SL-027304 (235.96 acres), SL-063058 (400 acres), U-010581 (1,842.39 acres), U-05067 (360 acres), UTU-66060 (1093.32 acres), UTU-69600 (801.48 acres) and UTU-79975 (702.73 acres). The remaining 11.45 acres are BLM surface rights-of-way #62045 (10 acres) and #64158 (1.45 acres). Please see Figure 1-2 and Figure 1-2(A).

This property is located in the Book Cliffs coal field and includes Alrad Canyon, Deadman Canyon, Starpoint Canyon, Straight Canyon, and Hoffman Creek Canyon areas with coal outcropping along the cliffs between 7,000 feet and 7,700 feet elevations. The topography is very rugged, the Book Cliffs being dissected by box canyons created by ephemeral streams. Large sandstone boulders eroded from the cliffs are scattered along the sides of the canyons. The land is undeveloped, used primarily for grazing, and there are no areas of national importance in the region. Mountain-Brush vegetative type covers most of the area.

There are no perennial streams or bodies of water on the property. Ground water recharge is from precipitation in the vicinity. Water supply for mine development is from water encountered in the existing underground mine workings. Culinary usage is supplied by an independent contractor who hauls Price City culinary water to the mine on an as-needed basis. Historically, coal mining has been the only industry in the permit area and there are several abandoned mines located on the

property. No oil or gas wells exist in the area.

Access to the mine plan area is by way of the Airport Road, an existing paved county road which has been upgraded and is maintained by Carbon County. It is used as an access road as well as a haul road. All surface and support facilities necessary for present operations have been completed and are located on the Zion's fee or on rights-of-way granted by the Bureau of Land Management. This is also a small private easement granted to Andalex from David Cave for a small portion of pond E. Andalex has acquired all applicable state and federal licenses, permits, and rights-of-way necessary to conduct mining activities on all private (fee) and federal leases.

As of 7-6/2007 the Apex Mine and the Pinnacle Mine have been worked out. The Apex Mine has been sealed at the portals. The Pinnacle mine is still being ventilated because the power to the Aberdeen mine runs into the Pinnacle mine from the substation and then drops down to the Aberdeen Mine through a borehole connecting the two mines. However, there are no plans to produce any more coal from the Pinnacle Mine. Therefore, all existing and future mine production from the Centennial Project will be solely from the Aberdeen Mine

The mining method being employed in the Aberdeen Mine is gateroad development utilizing continuous miners with final extraction by longwall. Certain fringe area reserves, inadequate for longwall panels, will be by room-and-pillar method.

This operation does not face any of the mining complications caused by faults or intrusives. The mine plan area is located in a region where mining has been the major industry; therefore, the nearby communities are geared for coal operations. The labor supply is excellent and well trained. With these considerations, and Andalex's prudent management, the Centennial Project will continue to be a model mining operation in the Carbon County area with very minimal environmental and socioeconomic impact.

Upon cessation of final mining activities, reclamation activities will commence as soon as is practicable, according to the plans outlined in this application. The land will be restored according to available technology to as nearly its original condition as is possible.

Organization of Application

This underground mining permit application has been organized in accordance with the general requirements for format and contents as outlined in the R645- Coal Mining Rules.

R645-301-111.100. OBJECTIVES

Objectives

The objective of this chapter is to set forth all relevant information concerning ownership and control of Andalex Resources, Inc., the ownership and control of the property to be affected by mining activities and all other information and documentation required.

Please note that right-of-entry information for all new Leases is included in Appendix J, "Other Approvals".

R645-301-111.200. RESPONSIBILITY

Andalex Resources, Inc., is responsible for submission of information and will pay abandoned mine reclamation fees.

R645-301-111.300. APPLICABILITY

The requirements of R645-301-100 apply to Andalex Resources, Inc.

R645-301-112. IDENTIFICATION OF INTERESTS

a) Permit Applicant

Andalex Resources, Inc. (Employer ID # 61-0931325)
P.O. Box 910
East Carbon, Utah 84520
(801) 888-4000

b) Legal and Equitable Owners of Record

Earth work for the Aberdeen Mine was completed in 1989. Surface facilities for the Aberdeen Mine were completed early in 1990. All existing facilities are located either on land owned by Zions Securities Corporation or on federal land. The addresses of these owners of record are as follow:

Bureau of Land Management (801) 524-3004
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

Zion Securities Corporation (801) 363-3841
10 East South Temple
Salt Lake City, Utah 84111

All coal to be mined on the permit area is owned by the

federal government, Zion Securities Corporation, Sunedco Coal Company or AMCA Coal Leasing, Inc, a wholly-owned subsidiary of UtahAmerican Energy Inc.. The addresses of these owners of record are as follow:

Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

AMCA Coal Leasing, Inc. (Employer No. 61-0914254)
PO Box 910
East Carbon, Utah 84520

Zion Securities Corporation
10 East South Temple
Salt Lake City, Utah 84111

Sunedco Coal Company
7401 West Mansfield Avenue
Suite 418
P.O. Box 35-B
Lakewood, Colorado 80235

R645-301-112.100. TYPE OF BUSINESS

Andalex Resources is a corporation organized and existing under the laws of Delaware and qualified to do business in Utah. Andalex Resources, Inc, is a wholly owned subsidiary of UtahAmerican Energy Inc., which in turn is a wholly owned subsidiary of Murray Energy Corporation, which in turn is a wholly-owned subsidiary of Murray Energy Holdings Co. Andalex began mining operations in the Pinnacle Mine October, 1980, and in the Apex Mine in late 1982. Mining commenced in the Aberdeen Mine in mid-1988. These mines are located on fee and federal lands in Carbon County, Utah. Andalex, the designated operator, along with AMCA Coal Leasing, Inc., its land acquisition and development branch, controls all federal and fee mining leases within the mine plan area. This underground mining permit application has been prepared by Andalex Resources and is being submitted for review and approval by the appropriate regulatory authorities.

R645-301-112.200. NAMES, LOCATIONS, RESIDENT AGENT

Resident Agent who will accept service of process for Andalex Resources, Inc., Centennial Mines, ACT/007/019:

Dave Shaver
Andalex Resources, Inc.
P.O. Box 910
East Carbon, Utah 84520
phone: (435) 888-4017

Also, see Chapter 8 for notarized statement pertaining to completeness and accuracy.

R645-301-112.300. OWNERSHIP AND CONTROL

See Appendix 1, Part 1 for ownership and control information.

R645-301-112.310. OFFICERS AND SHAREHOLDERS

See Appendix 1, Part 1 for ownership and control information.

R645-301-112.320. OWNERSHIP AND CONTROL RELATIONSHIP TO APPLICANT

See Appendix 1, Part 1 for ownership and control information.

R645-301-112.400. PENDING, CURRENT AND PREVIOUS COAL PERMITS

See Appendix 1, Part 2 for current and previous coal mining permits

R645-301-112.500. SURFACE AND MINERAL OWNERSHIP

Owners of Record of Surface and Subsurface Contiguous Areas

Names and addresses of all owners of record for all surface and subsurface areas contiguous to and within the permit area are listed below and indicated on Plates 2 and 3.

Subsurface Owners

Franklin Real Estate Company (American Electric Power)
#2 Broadway
New York, New York (contiguous)

Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155 (contiguous & within)

State of Utah
School and Institutional Trust Lands Administration (SITLA)
675 East 500 South, Suite 500
Salt Lake City, Utah 84102-2818 (contiguous)

Andalex Resources, Inc.
PO Box 910
East Carbon, Utah 84520 (within)

Sunedco Coal Company
7401 West Mansfield Avenue
Suite 418
P.O. Box 35-B
Lakewood, Colorado 80235 (contiguous & within)

Zion Security Corp.
10 East South Temple
Salt Lake City, Utah 84111 (within)

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501 (contiguous & within)

Oso Energy Resources
900 Main Avenue
Durango, Colorado 81301 (Gas rights)

Surface Owners

Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155 (contiguous & within)

Gladys R. Artman
P.O. Box 22
Mountain City, Georgia 30562 (contiguous & within)

F. and D. Shimmin
711 North 5th East
Price, Utah 84501 (contiguous)

Sunedco Coal Company
7401 West Mansfield Avenue
Suite 418
P.O. Box 35-B
Lakewood, Colorado 80235 (contiguous & within)

R. and E. Nelson
583 Sundial Drive
Moab, Utah 84532 (within)

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501 (contiguous & within)

J & S Critchlow (Cave, et.al)
144 South 1650 East
Price, Utah 84501 (contiguous & within)

Andalex Resources Inc.
P.O. Box 910
East Carbon, Utah 84520 (within)

Zion Security Corporation
10 East South Temple
Salt Lake City, Utah 84111 (within)

State of Utah
School and Institutional Trust Lands Administration (SITLA)
675 East 500 South, Suite 500
Salt Lake City, Utah 84180 (contiguous & within)

R645-301-112.600. ADJACENT SURFACE AND MINERAL OWNERSHIP

Interests in Contiguous Lands
The Uintah-Southwest Utah Federal Coal Leasing Program has been dropped by the U.S. Department of Interior; therefore, previous expressions of interests by this company are no longer valid. However, existing unleased federally owned coal resources remain of interest to Andalex at such time as currently controlled reserves have been exhausted.

R645-301-112.700. MSHA NUMBERS FOR ALL MINE-ASSOCIATED STRUCTURES

The Centennial Project includes the development of three separate mines. The names and M.S.H.A. I.D. numbers for existing mines and all sections are as follow:

Pinnacle Mine - M.S.H.A. I.D. #42-01474
Apex Mine - M.S.H.A. I.D. #42-01750
Aberdeen Mine - M.S.H.A. I.D. #42-02028

R645-301-112.800. STATEMENT OF ALL LANDS AND INTERESTS IN LANDS

The Uintah-Southwest Utah Federal Coal Leasing Program has been dropped by the U.S. Department of Interior; therefore, previous expressions of interests by this company are no longer valid. However, existing unleased federally owned coal resources remain of interest to Andalex at such time as currently controlled reserves have been exhausted.

R645-301-113. VIOLATION INFORMATION

History of Violations

Appendix 1, Part 3 contains a listing of all violations received within the last three years prior to the date of this application by Andalex and affiliated companies.

R645-301-113.100. COMPLIANCE INFORMATION

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex haven't had a mining permit suspended or revoked within the last five years.

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex have not forfeited a mining bond or similar security in lieu of bond.

Appendix 1, Part 3 contains a listing of all violations received within the last three years prior to the date of this application by Andalex and affiliated companies.

R645-301-113.110. SUSPENDED OR REVOKED PERMITS

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex haven't had a mining permit

suspended or revoked within the last five years.

R645-301-113.120. FORFEITED BONDS

Andalex Resources, Inc., affiliates or persons controlled by or under common control with Andalex have not forfeited a mining bond or similar security in lieu of bond.

R645-301-113.200. EXPLANATION OF PERMIT OF BOND FORFEITURE

N/A

R645-301-113.210 PERMIT AND BOND IDENTIFICATION

N/A

R645-301-113.220. REGULATORY AUTHORITIES INVOLVED

See above

R645-301-113.230. CURRENT STATUS OF PERMIT AND BOND

See above

R645-301-113.240. ADMINISTRATIVE OR JUDICIAL PROCEDURES

Appendix 1, Part 3

R645-301-113.250. CURRENT STATUS OF PROCEEDINGS

Appendix 1, Part 3

R645-301-113.300. LIST OF ALL VIOLATIONS NOTICES

Appendix 1, Part 3

R645-301-113.310. IDENTIFICATION OF VIOLATIONS

Appendix 1, Part 3

R645-301-113.320. DESCRIPTION OF VIOLATIONS

Appendix 1, Part 3

R645-301-113.330. LOCATION OF VIOLATIONS PROCEEDINGS

Appendix 1, Part 3

R645-301-113.340. STATUS OF VIOLATIONS PROCEEDINGS

Appendix 1, Part 3

R645-301-113.350. ACTIONS TAKEN TO ABATE VIOLATIONS

Appendix 1, Part 3

R645-301-114. RIGHT-OF-ENTRY INFORMATION

Andalex Resources, Inc., in sublease agreement with AMCA Coal Leasing, Inc., currently holds approximately 6528.83 acres of private and federal coal leases and rights-of-way listed below, all of which are included in their entirety within the permit area. Andalex basis its legal right to enter and conduct mining activities in the permit area pursuant to the language contained in the Federal Coal Leases, Section 2, Rights of Lessee as follows:

> "The lessor, in consideration of any bonus paid (or to be paid if deferred), rents and royalties and other conditions hereinafter set forth, hereby grants and leases to the lessee the exclusive right and privilege to mine and dispose of all coal ... subject to the conditions, limitations and prohibitions provided in this lease and in applicable acts and regulations, the right to construct all works, buildings, structures, equipment, and appliances which may be necessary and convenient for the mining and preparation of the coal for market, and subject to the conditions herein provided, to use so much of the surface as may reasonably be required in the exercise of the rights and privileges herein granted..."

A similar right to enter and conduct underground mining activities is contained in the private lease agreement with the Zion Securities Corporation as follows:

> "During the life of the lease, so long as lessee is not in default hereunder, it may freely prospect, mine and develop the lease premises, extract and sell such coal therefrom as it may elect, and use the surface and underground thereof for all lawful purposes including the exploration and mining to be conducted therein and thereon. It may also use the leased lands in connection with the mining and development of other lands which it may own, lease, or acquire as a part of its general mining operations in the area."

Legal right-of-entry information for all federal and fee leases and rights-of-way are found in Appendix J, "Other Approvals". None of the leases' rights-of-entry is a subject of pending litigation.

The Federal Coal Leases are described as follows (please see Figure 1-2):

1) SL-027304:

Tract 1: (original lease)
T.13S., R.11E., SLM, Utah
Sec. 7; S2SE4,
Sec. 18; NW4NE4.

Tract 2: (lease modification)
T.13S., R.11E., SLM, Utah
Sec. 7; Lot 4;
Sec. 18; Lot 1, N2NE4NW4, SW4NE4NW4
entire lease (Tracts 1 and 2) containing 235.96 acres, more or less.

This lease was originally assigned to W.F. Olsen on September 1, 1925. On May 1, 1959, the lease was assigned to F.H. Larson and then to Centennial Coal Associates on February 1, 1973. AMCA Coal Leasing, Inc., acquired the lease in February, 1977 and subsequently added Tract 2 through lease modification criteria on October 26, 1981.

*****(NOTE: The legal description of the composite lease as described on the existing BLM lease form is as follows:
T.13S., R.11E., SLM, Utah
Sec. 7; Lot 4, S2SE4
Sec. 18; Lot 1, NW4NE4, N2NE4NW4, SW4NE4NW4
containing 235.96 acres, more or less.)*****

2) SL-063058:

Tract 1: (original lease)
T.13S., R.11E., SLM, Utah
Sec. 8; S2SW4;
Sec. 17; N2NW4, SE4NW4;
Sec. 18; NE4NE4.

Tract 2: (lease modification)
T.13S., R.11E., SLM, Utah
Sec. 17; SW4NW4, NE4NW4SW4, W2NW4SW4,
Sec. 18; E2SE4NE4, NW4SE4NE4, SW4NE4, E2NE4SE4
entire lease containing 400 acres, more or less.

The original lease of 80 acres was assigned to C.D. Sutton on August 3, 1942. On July 27, 1950, the lease was amended to embrace 200 acres. An additional 40 acres was added December 13, 1951. The leases were posted to F.H. Larson on May 1, 1970 and then to Centennial Coal Associates on February 1, 1973. AMCA Coal Leasing, Inc., acquired the lease in February, 1977 and subsequently added Tract 2 through the federal lease modification criteria.

*****(NOTE: The legal description of the composite lease as described on the existing BLM lease form is as follows:
T.13S., R.11E., SLM, Utah
Sec. 8; S2SW4
Sec. 17; NW4, NE4NW4SW4, W2NW4SW4
Sec. 18; NE4NE4, E2SE4NE4, NW4SE4NE4, SW4NE4, E2NE4SE4
containing 400 acres, more or less.)*****

3) UTU-010581:

Tract 1: (original lease)
T.13S., R.11E., SLM, Utah
Sec. 5; All
Sec. 6, All
Sec. 7; Lot 1, NE4, NE4NW4, N2SE4;
Sec. 8; N2, N2S2, S2SE4;
Sec. 9; W2SW4;
Sec. 17; N2NE4.

Tract 2: (lease modification)
T.13S., R.11E., SLM, Utah
Sec. 17; S2NE4, N2NE4SW4, NE4SE4, N2NW4SE4
entire lease containing 1,842.39 acres, more or less.

This lease was assigned to C.D. Sutton on February 1, 1956. On May 1, 1970 the lease was assigned to F.H. Larson and then to Centennial Coal Associates on February 1, 1973. AMCA Coal Leasing, Inc., acquired the lease in February, 1977 and subsequently added Tract 2 through the federal lease modification criteria.

*****(NOTE: The legal description of the composite lease as described on the existing BLM lease form is as follows:
T.13S., R.11E., SLM, Utah
Sec. 5; All
Sec. 6; All
Sec. 7; Lot 1, NE4NW4,NE4, N2SE4
Sec. 8; N2, N2S2, S2SE4
Sec. 9; W2SW4
Sec. 17; NE4, N2NE4SW4, NE4SE4, N2NW4SE4

containing 1,842.39 acres, more or less.)*****

4) U-05067-08916

T.13S., R.11E., SLM, Utah
Sec. 4; Lots 5-8
Sec. 9; NW4NE4, N2NW4, SW4NW4, NE4SW4
containing 360 acres, more or less.

5) UTU-66060

Tract 1: (original lease)
T.12S, R.11E., SLM, Utah
Sec. 31; Lots 3-6, Lots 13-22

T.13S, R.10E., SLM, Utah
Sec. 1; Lots 1-8, S2N2
Sec. 12; Lot 1

Tract 2: (lease modification)
T.12S., R.11E., SLM, Utah
Sec. 31; Lot 12
Sec. 32; W2SW4, SW4NW4
entire lease containing 1093.32 acres more or less.

UTU-66060 is subject to the terms and conditions set forth in the Federal Coal Lease issued by the Bureau of Land Management October 3, 1994.

*****(NOTE: The legal description of the composite lease as described on the existing BLM lease form is as follows:
T.12S., R.11E., SLM, Utah
Sec. 31; Lots 3-6, Lots 12-22
Sec. 32; W2SW4, SW4NW4
T.13S., R.10E., SLM, Utah
Sec. 1; Lots 1-8, S2N2
Sec. 12; Lot 1
containing 1093.32 acres more or less.)*****

6) UTU-69600

T.13S., R10E. SLM, Carbon County, Utah
Sec. 1: SW4
Sec. 12: lots 2-11, W2W2, NE4SW4
containing 801.48 acres, more or less

The name and address of the lessor is American Electric Power Service Corporation, Fuel Supply Department, P.O. Box

700, Lancaster, Ohio 43130. This agreement was executed on May 1, 1992.

7) UTU-79975

T. 12S., R. 11E. SLM, Utah
Sec. 29; SW4SW4, SW4SE4
Sec. 30; Lots 4, 12, 14-16
Sec. 31; Lots 1, 2, 7-11
Sec. 32, W2NE4, E2NW4, NW4NW4, NE4SW4
containing 702.73 acres, more or less.

The private fee leases are described as follows (see Figure 1-2):

8) Mathis Fee Lease

T.12S., R.10E., SLM, Utah
Sec. 36; All
containing 640 acres, more or less.

9) Zion Fee Lease

T.13S., R.11E., SLM, Carbon County, Utah
Sec. 7; S2NW4, N2SW4, SE4SW4
containing 200 acres, more or less.

The name and address of the lessor is Zion Securities Corporation, 10 East South Temple Street, Salt Lake City, Utah. This lease was originally made and entered into between Zion's and Centennial Coal Associates on August 1, 1972. AMCA Coal Leasing Inc. acquired the lease in February, 1977.

10) Sunedco Fee Lease

T.13S., R.11E., SLM, Carbon County, Utah
Sec. 9; E2NE4, SW4NE4, N2SE4
containing 200 acres, more or less.

The name and address of the lessor is Sunedco Coal Company, 7401 West Mansfield Avenue, Suite 418, P.O. Box 35-B, Lakewood, Colorado 80235. AMCA Coal Leasing, Inc. acquired the lease in June, 1988.

11) Andalex Fee

T.13S., R.11E.,SLM, Carbon County, Utah
Sec. 9; SE4NW4
containing 40 acres, more or less.

The surface rights-of-way are described as follows (see Figure 1-2):

12) BLM Right-of-Way U-62045

T.13S., R.11E., SLM, Carbon County, Utah
Sec. 18; SE4NE4NW4 containing 10 acres, more or less.

This right-of-way was granted for construction of some of the surface facilities in Deadman Canyon, namely certain structures associated with the Aberdeen mine surface facilities in the southernmost area of the mineyard.

The grantor is the Department of the Interior, Bureau of Land Management, 400 West 200 South, Suite 500, Salt Lake City, Utah 84145-0155

13) BLM Right-of-Way UTU-64158

T.13S., R.10E., SLM, Carbon County, Utah
Sec. 13; Lot 1 (portions of)

T.13S., R.11E., SLM, Carbon County, Utah
Sec. 18; Lot 2, NE4SW4 (portions of)containing 1.45 acres, more or less.

This right-of-way was granted for construction of the main mine fan installation and the access road in the Left Fork.

The grantor is the Department of the Interior, Bureau of Land Management, 400 West 200 South, Suite 500, Salt Lake City, Utah 84145-0155

14) Cave Private Land Easement

T.13S., R.11E., SLM, Carbon County, Utah
Sec. 18; A portion of NE4NE4SE4NW4 containing 1.5 acres, more or less.

This easement was granted for the construction of sediment pond E

located at the extreme southern end of the mineyard.

This easement has been granted by David R Cave et al whose address is 3379 East Hwy 6, Price, Utah 84501.

Permit Area	Total lease area (described above)	6528.83 acres
	Less Oso gaswell area	11.92 acres
	Total permit area	6516.91 acres

The following is a description of the Permit Area as shown on Figure 1-2. This is a composite description of all federal and private coal leases and rights-of-way listed above which comprise the permit area, less the Oso gaswell and pipeline area, which has been deleted from the permit area. Oso Oil and Gas Properties, LLC (15810 Park Ten Place, Suite 160, Houston TX 77084) is the owner of the gas rights from all gas being liberated from the gob vent holes (GVH) on the leases associated with the Centennial Project. Refer to Appendix Z for a complete legal description of the OSO gaswell/pipeline. Sections marked with an asterisk (*) are included in their entirety within the permit area.

T.12S., R.10E., SLM, Carbon County, Utah
Sec. 36; All (Mathis fee lease)
except for 1.64 acres associated with the Oso pipeline (see Appendix Z)

T.12S., R.11E., SLM, Carbon County, Utah
Sec. 29; SW4SW4, SW4SE4 (part of UTU-79975)

Sec. 30; Lots 4,12,14-16 (part of UTU-79975)

Sec. 31; Lots 1, 2, 7-11 (part of UTU-79975)

Lots 3-6, 12-22 (part of UTU-66060)
except for 7.86 acres associated with the Oso gaswell and pipeline (see Appendix Z)

Sec. 32; W2NE4, E2NW4, NW4NW4, NE4SW4 (part of UTU-79975)

W2SW4, SW4NW4 (part of UTU-66060)

T.13S., R.10E., SLM, Carbon County, Utah
Sec. 1; Lots 1-8, S2N2 (part of UTU-66060)
except for 2.42 acres associated with the Oso pipeline (see Appendix Z)

SW4 (part of UTU-69600)

Sec. 12*; Lot 1 (part of UTU-66060)

Lots 2-11, W2W2, NE4SW4 (part of UTU-69600)

Sec. 13. Lot 1 (a portion thereof, part of BLM ROW 64158)

T.13S., R.11E., SLM, Carbon County, Utah

Sec. 4; Lots 5-8 (part of U-05067)

Sec. 5*; All (part of UTU-010581)

Sec. 6*; All (part of UTU-010581)

Sec. 7*; Lot 1, NE4NW4, NE4, N2SE4 (part of UTU-010581)

Lot 4, S2SE4 (part of SL-027304)

S2NW4, N2SW4, SE4SW4 (Zions Fee Lease)

Sec. 8*; N2, N2S2, S2SE4 (part of UTU-010581)

S2SW4 (part of SL-63058)

Sec. 9; E2NE4, SW4NE4, SE4NW4, N2SE4 (Sunedco Fee Lease)

NW4NE4, N2NW4, SW4NW4, NE4SW4 (part of U-05067)

Sec. 17; NE4, N2NE4SW4, NE4SE4, N2NW4SE4 (part of UTU-010581)

NW4, NE4NW4SW4, W2NW4SW4 (part of SL-063058)

Sec. 18; NE4NE4, E2SE4NE4, NW4SE4NE4, SW4NE4, E2NE4SE4 (part of SL-063058)

Lot 1, NW4NE4, N2NE4NW4, SW4NE4NW4 (part of SL-027304)

SE4NE4NW4 (BLM ROW U-62045)

Lot 2, NE4SW4 (portions thereof, part of BLM ROW UTU-64158)

NE4NE4SE4NW4 (a portion thereof, Cave private surface easement)

R645-301-114.100. DOCUMENTATION

Appendix J

R645-301-114.200. SEVERED SURFACE AND MINERAL ESTATES

Appendix J

R645-301-114.210. WRITTEN SURFACE OWNER CONSENT FOR COAL EXTRACTION

Appendix R

R645-301-114.220. CONVEYANCE EXPRESSLY GRANTING RIGHT TO MINE COAL

Appendix J

R645-301-114.230. DOCUMENTATION OF LEGAL AUTHORITY TO MINE COAL

Appendix J

R645-301-114.300. ADJUDICATION OF PROPERTY RIGHTS DISPUTES

R645-301-114.300. ADJUDICATION OF PROPERTY RIGHTS DISPUTES

The Division does not have the authority to adjudicate property rights disputes.

R645-301-115. STATUS OF UNSUITABILITY CLAIMS

Carbon County has authorized mining and reclamation activities within 100 feet of County Road 299. (See Appendix B)

R645-301-115.100. IDENTIFICATION OF LANDS UNSUITABLE

The permit area is not within an area designated unsuitable for the surface effects of underground coal mining activities or under study for designation in an administrative proceeding initiated under those pasts. Further, there are no occupied dwellings within 300 feet of the permit area including the Hoffman Creek area.

R645-301-115.200. CLAIMS OF EXEMPTION BY COMMITMENT PRIOR TO JANUARY 4, 1977

None.

R645-301-115.300. MINING AND RECLAMATION OPERATIONS WITHIN 300 FEET OF AN OCCUPIED DWELLING OR WITHIN 100 FEET OF A PUBLIC ROAD

None.

R645-301-116. PERMIT TERM

The starting and termination dates as well as the horizontal and vertical extent of the proposed underground mining activities over the total life of the permit are indicated on the revised Pinnacle underground layout map included as Plate 30. Also refer to the underground layout maps for the Apex and Aberdeen Mines (see Plates 29 and 31). Refer to plate 41.

R645-301-116.100. SCHEDULE OF PHASED MINING AND RECLAMATION ACTIVITIES

All surface facilities have been constructed for the Pinnacle, Apex and Aberdeen Mines. Earthwork for the Aberdeen Mine was completed in 1989. The surface facilities for the Aberdeen Mine were completed in early 1990. No additional surface facilities are required for any new leases.

Andalex has added a fan installation in the left-hand fork of Deadman Canyon. This installation was conducted according to measures outlined by the Bureau of Land Management as part of Right-of-Way U-64158. (Copy of Right-of-Way is included in Appendix B.) The location of this breakout is shown on Plate 29 (R.O.W.).

Andalex will fill, regrade and stabilize rills and gullies over 9 inches in depth. Further, Andalex has agreed to interim stabilization of all slopes and embankments within the disturbed area and has done so. One slope located at the bottom of the office driveway, has been attempted through hydroseeding, fertilizing and mulching techniques on three separate occasions. No significant erosion problems have occurred, Andalex will notify the Division in the event of any slides or other damage.

Andalex will cover acid or toxic forming materials if any are encountered. Andalex will advise the Division in the event of a temporary shutdown, such as a letter sent to the Division when Andalex's Apex Mine was temporarily closed.

R645-301-116.200. PERMIT TERM IN EXCESS OF FIVE YEARS

The requested term of this permit is five years. Andalex will then apply for five year extensions over the life of the mine.

R645-301-116.210. COMPLETENESS AND ACCURACY FOR LONGER TERM

N/A

R645-301-116.220. DEMONSTRATION OF NEED FOR LONGER TERM

N/A

R645-301-117. INSURANCE, PROOF OF PUBLICATION AND FACILITIES OR STRUCTURES USED IN COMMON

Appendix B contains certificates of liability insurance covering personal injury and property damage resulting from this operation. Andalex commits to mitigate all subsidence related damage to renewable resources, including, but not limited to water, grazing, and wildlife habitat including raptor nests.

R645-301-117.100. LIABILITY INSURANCE

Appendix B

R645-301-117.200. NEWSPAPER PUBLICATION

A copy of the newspaper advertisement of this Mining and Reclamation Plan and proof of publication of the advertisement is filed with the Division and made part of the complete application. Also, please refer to this chapter for the public notice and proof of publication for the newly acquired Sunedco Lease.

R645-301-117.300. FACILITIES USED IN COMMON

The Centennial Project includes the development of three separate mines. The names and M.S.H.A. I.D. numbers for existing mines and all sections are as follow:

Pinnacle Mine - M.S.H.A. I.D. #42-01474
Apex Mine - M.S.H.A. I.D. #42-01750
Aberdeen Mine - M.S.H.A. I.D. #42-02028

All coal from the newly acquired AEP Lease will be mined simply as an underground extension of the existing Pinnacle and Aberdeen Mines.

R645-301-118. FILING FEE

N/A

R645-301-120. PERMIT APPLICATION FORMAT AND CONTENTS

Summary of Table of Contents

R645-301-121. REQUIREMENTS

R645-301-121.100. CURRENT INFORMATION

Information is current.

R645-301-121.200. CLEAR AND CONCISE

Information is clear and concise.

R645-301-121.300. FORMAT REQUIREMENTS

To facilitate review of the application, each chapter listed above has been further divided into specific parts and sections. These can be found listed in the detailed table of contents appearing at the beginning of this text along with the page numbers on which they appear. This table of contents also contains lists of figures, tables, plates, exhibits, and appendices to facilitate cross referencing between chapters.

Exhibits include appropriate supporting documents, reports and publications and are included as appendices.

Maps which were not reduced to fit into the text are included in a separate volume as plates. All maps and plans are submitted in accordance with the requirements.

R645-301-123. APPLICATION FOR PERMITS, CHANGES, RENEWALS,

OR TRANSFERS

Text deleted as instructed by Technical analysis.

R645-301-130. REPORTING AND TECHNICAL DATA

Persons and Consultants Involved

The following persons and/or organizations were involved in collection and analysis of the technical data set forth in this application.

1. In-House Consulting Services

   a) Andalex Resources, Inc. - AMCA Coal Leasing, Inc.
   Samuel C. Quigley - Western Project Manager
   Michael W. Glasson - Senior Geologist
   Allen D. Emmel - Environmental Planning Coordinator

2. Outside Consulting Services

   a) Dan W. Guy - Registered Professional Engineer
   (State of Utah No. 4548)
   Price, Utah
   -Sedimentation and Drainage Control Plan
   (April, 1980)

   - Wastewater Disposal System; Pinnacle Mine
   (April, 1980)
   Office Building (September, 1980)

   b) Bruce T.S. Ware - Registered Land Surveyor
   Price, Utah

   c) A and W Surveying
   Price, Utah

   d) Commercial Testing & Engineering Co.
   Denver, Colorado

   e) Standard Laboratories
   Huntington, Utah

   f) Western Testing and Engineering
   Helper, Utah

   g) VanCott, Bagely, Cornwall and McCarthy
   Attorneys at Law

Salt Lake City, Utah

h) Rollins, Brown, and Gunnel
Provo, Utah

i) Brigham Young University
Provo, Utah
Department of Zoology
Clayton M. White
(Raptor Study)
Department of Anthropology/Archaeology
Dr. Ray T. Matheny
(Archaeological Survey)

j) Earth Environmental Consultants
Albuquerque, New Mexico

k) Vaughn Hansen Associates
Salt Lake City, Utah
(Hydrology Study)

l) Horrocks Engineers
American Fork, Utah

Coordination and Consultation with Governmental Agencies

The following governmental agencies were consulted in the preparation of information set forth in this application.

U.S. Department of Agriculture
Soil Conservation Service
Price, Utah
(Soil and Vegetation Survey)

U.S. Department of the Interior
Bureau of Land Management
Price, Utah
Salt Lake City, Utah

Office of Surface Mining, Reclamation and Enforcement
Denver, Colorado

U.S. Geological Survey
Salt Lake City, Utah

State of Utah:
Department of Natural Resources
Division of Oil, Gas, and Mining
Salt Lake City, Utah

Antiquities Section (Consulting Services Branch)
Salt Lake City, Utah
(Archaeological Survey)

Department of Natural Resources
Division of Wildlife Resources
Salt Lake City, Utah

References:

AMCA Coal Leasing, Inc., 1978. Mining and Reclamation Plan, Zion's Fee. Submitted to the State of Utah, Department of Natural Resources, D.O.G.M.

Centennial Coal Associates, 1976. Mining Application. Submitted to the U.S. Geological Survey.

Doelling, H.H., 1972. Central Utah Coal Fields. U.G.M.S. Monograph Series No. 3.

U.S.D.A., 1978. Soil Survey and Interpretations of the Coal Creek Emery Portion of the Price River and Emery County Areas, Carbon and Emery Counties, Utah. S.C.S.

U.S.D.I., 1979. Final Environmental Statement, Development of Coal Resources in Central Utah, Parts 1 and 2.

U.G.M.S., 1966. Central Utah Coals. U.G.M.S. Bulletin No. 80.

R645-301-131. TECHNICAL DATA REQUIREMENTS

Where applicable, technical data submitted has been identified as to who prepared the information and is stamped by that registered professional engineer (P.E.).

R645-301-132. TECHNICAL ANALYSES REQUIREMENTS

Analyses are prepared by a qualified professional engineer.

R645-301-140. MAPS AND PLANS

R645-301-141. MAP FORMATS

R645-301-142. PHASES OF OPERATIONS AND MINING ACTIVITY

R645-301-142.100. PRIOR TO AUGUST 3, 1977

None by Andalex Resources. Several mines were operated by other independent companies or individuals in areas presently consumed by Andalex's surface facilities. Andalex's encroachment onto these previously disturbed areas transferred the responsibility for reclamation to Andalex. The specific locations of disturbed areas prior to Andalex's mining activities is irrelevant.

R645-301-142.200. AFTER AUGUST 3, 1977

All of Andalex's surface facilities and mining operations began after August 3, 1977.

R645-301-142.210. PRIOR TO MAY 3, 1978

See R645-301-142.100.

R645-301-142.220. SMALL OPERATOR'S EXEMPTION PRIOR TO JANUARY 1, 1979

N/A

R645-301-142.300. AFTER MAY 3, 1978 (OR JANUARY 1, 1979 FOR SMALL OPERATOR'S EXEMPTION) AND PRIOR TO APPROVAL OF STATE PROGRAM

N/A

R645-301-142.400. AFTER ISSUANCE OF PERMIT BY THE DIVISION

Refer to permit area map, Plate 4

R645-301-150. COMPLETENESS

Per Division.

APPENDIX 1, PART 1

OWNERSHIP AND CONTROL

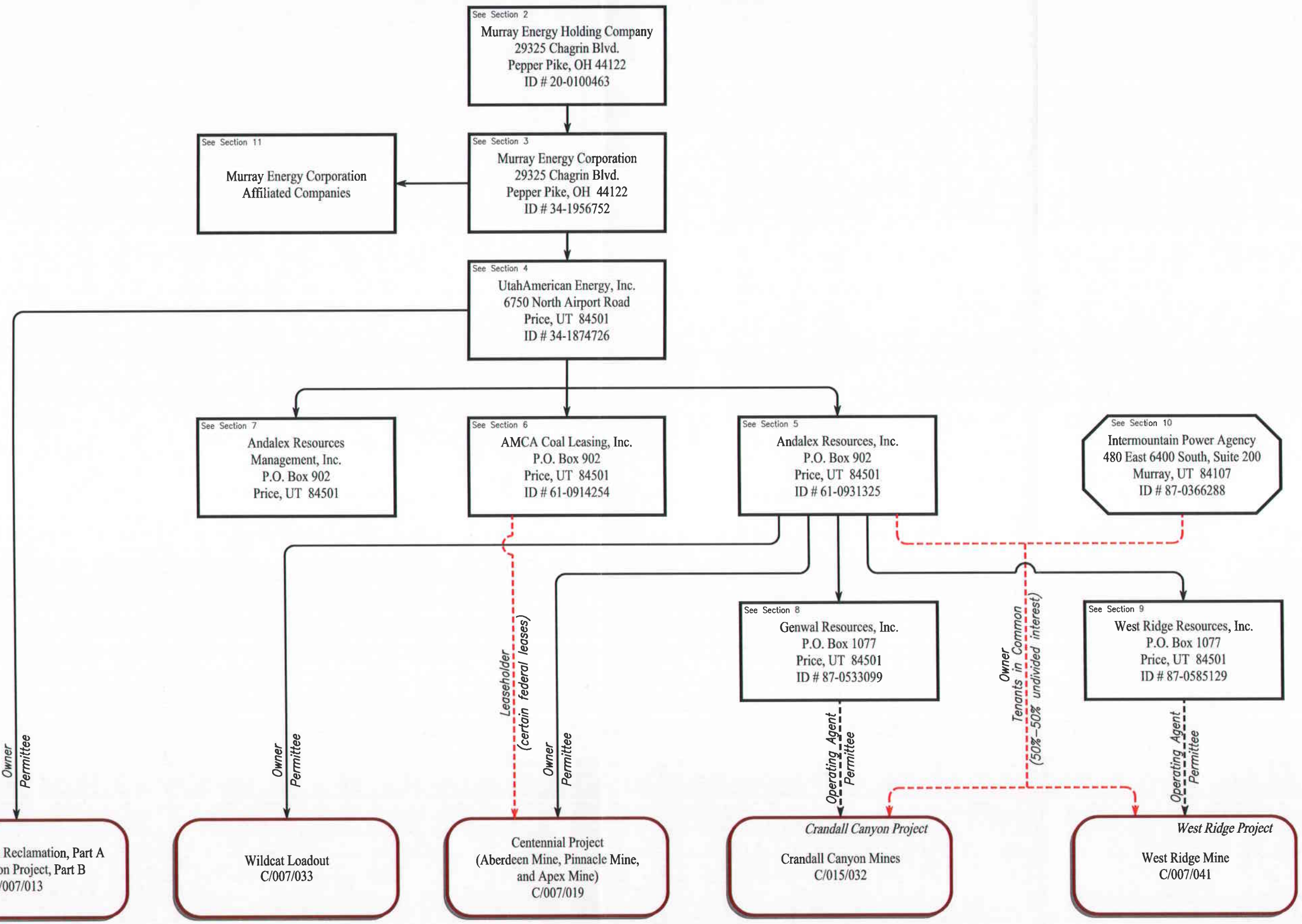
OWNERSHIP AND CONTROL

REVISED 1/12/2010

Section 1

Insert
Family Tree

OWNERSHIP AND CONTROL



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Section 2

MURRAY ENERGY HOLDINGS CO.
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

Robert E. Murray	President & CEO	6/30/03	11/29/05
Scott Boyle	President & CEO	11/29/05	12/20/05
Michael D. Loiacono	President & CEO	1/10/05	4/23/07
Robert D. Moore	President & CEO	4/23/07	
Michael D. Loiacono	Treasurer	1/10/05 6/30/03	
Michael O. McKown	Secretary	6/30/03	

Incorporation Information:

State of Incorporation	Delaware; Charter No. 3676958
Date of Incorporation	June 27, 2003
ID #	20-0100463

Shareholders:

Robert Eugene Murray
Robert Edward Murray
Jonathan Robert Murray
Ryan Michael Murray
Fifth Third Bank of
Northeast Ohio, Trustee

Directors:

Robert E. Murray	6/30/03	
Michael D. Loiacono	6/30/03	4/23/07
Michael O. McKown	6/30/03	
Robert D. Moore	4/23/07	

Section 3

MURRAY ENERGY CORPORATION
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Appointment of Officers

		Begin	End
Robert E. Murray	Chairman, President &	02/23/01	
	Chief Executive Officer	02/23/01	
John R. Forrelli	Vice President	12/18/03	12/17/04
Robert D. Moore	Vice President &	12/17/04	
	Chief Financial Officer	04/23/07	
P. Bruce Hill	Vice President - Human Resources	12/18/03	11/05/09
Michael D. Loiacono	Treasurer	02/23/01	
Michael D. Loiacono	Chief Financial Officer	12/20/05	04/23/07
Michael O. McKown	Secretary	02/23/01	

Incorporation Information:

State of Incorporation	Ohio; Charter No. 1211519
Date of Incorporation	February 23, 2001
ID#	34-1956752

Shareholder:

	Begin	End
Murray Energy Holdings Co. (100%)	10/21/03	
Robert E. Murray	2/23/01	10/21/03

Directors:

Robert E. Murray	02/23/01	
Michael D. Loiacono	12/20/05	04/23/07
Henry W. Fayne	01/28/05	
Richard L. Lawson	01/28/05	
Andrew D. Weissman	10/23/03	
Robert D. Moore	04/23/07	

Section 4

UTAHAMERICAN ENERGY, INC.
P.O. Box 910
East Carbon, Utah 84520

Officers:

		Begin	End
David W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
P. Bruce Hill	Chief Executive Officer	08/18/06	11/05/09
P. Bruce Hill	President	12/16/06	11/05/09
Douglas H. Smith	President	08/18/06	12/16/06
Clyde I. Borrell	President	07/31/98	05/19/06
Robert D. Moore	Treasurer	08/18/06	
Michael O. McKown	Secretary	08/18/06	
Marsha Baker Kocinski	Secretary	07/31/98	06/25/02
Barbara Boyce	Secretary	07/31/98	11/01/99
Jay Marshall	Manager	07/31/98	8/18/06

Directors:

Robert E. Murray	07/31/98	
P. Bruce Hill	08/18/06	11/05/09

Owner:[1]

Murray Energy Corp.

[1] Coal Resources, Inc. is incorrectly listed as a shareholder the AVS OFT. Coal Resources, Inc has never been a shareholder of UEI.

Section 5

ANDALEX RESOURCES, INC.
P.O. Box 910
East Carbon, Utah 84520

Officers:

		Begin	End
David W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
P. Bruce Hill	President and Chief Executive Officer	12/16/06	11/05/09
Douglas H. Smith	President	03/07/94	12/16/06
Robert D. Moore	Treasurer	08/18/06	
Michael O. McKown	Secretary	08/18/06	

Former Officers/Directors:

Peter B. Green	Director	01/05/98	08/18/06
Peter B. Green	CB	05/11/90	08/18/06
Peter B. Green	CEO	05/11/90	08/18/06
Ronald C. Beedie	Director	01/05/88	08/18/06
John Bradshaw	Secretary	02/05/90	08/18/06
John Bradshaw	Vice-President	02/05/90	08/18/06
Douglas H. Smith	Director	03/07/94	08/18/06
Samuel C. Quigley	Vice-President	02/24/95	08/18/06
Andalex Hungary Ltd.	Shareholder	12/28/20	08/18/06
Alexander Harold Samuel Green	Director	01/11/02	08/18/06

Directors:

Robert E. Murray	08/18/06	
P. Bruce Hill	08/18/06	11/05/09

Owner:

UtahAmerican Energy, Inc.	100%	08/18/06

MSHA Numbers

Apex Mine	42-01750
Pinnacle Mine	42-01474
Aberdeen Mine	42-02028
Wildcat Loadout	42-01864

Section 6

AMCA COAL LEASING, INC.
P.O. Box 910
East Carbon, Utah 84520

Appointment of Officers:

		Begin	End
David W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
P. Bruce Hill	President and Chief Executive Officer	12/16/06	11/05/09
Douglas H. Smith	President	08/18/06	12/16/06
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

Directors:

Robert E. Murray	08/18/06	
P. Bruce Hill	08/18/06	11/05/09

Owner:

UtahAmerican Energy, Inc., 100% ownership	08/18/06

Section 7

ANDALEX RESOURCES MANAGEMENT, INC.
P.O. Box 910
East Carbon, Utah 84520

Appointment of Officers:

		Begin	End
Davis W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill	President and Chief Executive Officer	12/16/06	11/05/09
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

Directors:

Robert E. Murray		08/18/06	
P. Bruce Hill		08/18/06	11/05/09

Shareholders:

UtahAmerican Energy, Inc.	100%	08/18/06

Section 8

GENWAL RESOURCES, INC.
P.O. Box 910
East Carbon, Utah 84520

Officers:		Begin	End
David W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill	President and Chief Executive Officer	12/16/06	11/05/09
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

Directors:		
Robert E. Murray	08/18/06	
P. Bruce Hill	08/18/06	11/05/09

Former Directors:	
Peter B. Green	8/9/06
Ronald C. Beedie	8/9/06
Douglas H. Smith	8/18/06
Gordon Ulrich	10/30/96

Former Officers:		
Peter B. Green	Chairman & CEO	8/9/06
Samuel C. Quigley	Vice President	8/18/06
John Bradshaw	Vice President	5/17/05
John Bradshaw	Secretary & Treasurer	8/18/06
Douglas H. Smith	President	12/16/06

Owner:

ANDALEX Resources, Inc. is and remains the sole shareholder of Genwal Resources, Inc.[I]

MSHA Numbers

Crandall Canyon Mine	42-01715

[I] Intermountain Power Agency holds, as a tenant in common, an undivided 50% interest in certain real property interests regarding the Crandall Canyon Mine.

Section 9

WEST RIDGE RESOURCES, INC.[I]
P.O. Box 910
East Carbon, Utah 84520

Officers:		Begin	End
David W. Hibbs	President	12/11/09	
Peter J. Vuljanic	Interim President	11/06/09	12/11/09
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill	President and CEO	12/16/06	11/05/09
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

Directors:		
Robert E. Murray	08/18/06	
P. Bruce Hill	08/18/06	11/05/09

Owner:

Andalex Resources, Inc.[II] 100%

Former Directors[III]	Begin Date	End Date
Peter B. Green	4/1/98	8/9/06
Ronald C. Beedie	4/1/98	8/9/06
Douglas H. Smith	4/1/98	9/18/06

Former Officers[IV]	Position	Begin Date	End Date
Peter B. Green	Chairman & CEO	4/15/98	8/9/06
Samuel C. Quigley	Vice President	4/15/98	8/18/06
John Bradshaw	Secretary	4/15/98	8/18/06
Douglas H. Smith	President	4/15/98	12/168/06

MSHA Number West Ridge Mine 42-022444

[I] WEST RIDGE Resources, Inc. ("WRRI") was formed on March 10, 1998. No actions of WRRI occurred before that date.

[II] ANDALEX Resources is (and remains) the sole shareholder of WRRI. WRRI and the Intermountain Power Agency hold certain real property interests as tenants in common, each owning a 50% interest therein.

[III] The initial directors of WRRI (as shown above) were appointed on April 1, 1998; the "Begin Date[s]" for each such director shown on the OFT form are incorrect.

[IV] The initial officers of WRRI (as shown above) were appointed on April 15, 1998; the "Begin Date[s]" for each such officer shown on the OFT form are incorrect. Also, Christopher G. Van Bever never served as an officer of WRRI; the information shown on the OFT form to the contrary is incorrect.

Section 10

INTERMOUNTAIN POWER AGENCY
(Tenant in Common, 50% undivided interest; West Ridge Mine Permit C/007/041; Crandall Canyon Mine Permit C/015/032)[I]
10653 South River Front Parkway, Suite 120
South Jordan, Utah 84095
(801) 938-1333

Appointment of Officers:

Ray Farrell	Chairman	12/1998
R. Leon Bowler	Vice-Chairman	12/1984
Ted L. Olson	Secretary	01/2002
Russell F. Fjeldsted	Treasurer	03/2007

Directors:	Begin Date	End Date
R. Leon Bowler	06/1977	
Ray Farrell	11/1978	
Clifford C. Michaelis[II]	01/1988	6/2007
Ted L. Olson	01/1990	
Russell F. Fjeldsted	01/1992	
Walter Meacham	01/1999	
Gary O. Merrill	01/2002	6/2007
Robert O. Christiansen	06/2007	
Ed Collins	06/2007	

[I] Intermountain Power Agency holds, as a tenant in common, an undivided 50% interest in certain real property interests regarding the West Ridge Mine and the Crandall Canyon Mine.
[II] Replacing controller Dan R. Eldredge, serving from April 11, 1988 to January 1990.

Name and address of IPA's general manager:

Jim Hewlett
Intermountain Power Agency
10653 South River Front Parkway, Suite 120
South Jordan, Utah 84095
Telephone (801) 938-1333
Assumed position December 1, 2007

Resident Agent for IPA:

Mark Buchi
Holme, Roberts, and Owen
299 South Main, Suite 1800
Salt Lake City, Utah 84111
Assumed position January, 1988

IPA Designated representative to the Crandall Canyon Project and West Ridge Project Management Boards:

Nick Kezman
Operating Agent
Los Angeles Department of Water & Power
111 North Hope Street, Room 1263
Los Angeles, California 90012-2694
Telephone (213) 367-0286

Principle Shareholders of IPA:

IPA has no shareholders. IPA is a political subdivision of the State of Utah created under the Interlocal Cooperation Act, Title II, Chapter 13, Utah Code Ann. 1953, as amended, and as such, has not issued stock.

Section 11

MURRAY ENERGY AFFILIATE COMPANIES

A. **AMCOAL HOLDINGS, INC.**
101 Prosperous Place, Suite 125
Lexington, Kentucky 40509

B. **THE AMERICAN COAL COMPANY**
P. O. Box 727
Harrisburg, Illinois 62946

C. **THE AMERICAN COAL SALES COMPANY**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

D. **AMERICAN COMPLIANCE COAL, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

E. **AMERICAN ENERGY CORPORATION**
43521 Mayhugh Hill Road
Township Highway 88
Beallsville, Ohio 43716

F. **ANCHOR LONGWALL AND REBUILD, INC.**
One Industrial Park Drive
Wheeling, West Virginia 26003

G. **AVONMORE RAIL LOADING, INC.**
125 Old Farm Drive,
Pittsburgh, PA 15239

H. **BELMONT COAL, INC.**
P. O. Box 146
Powhatan, Ohio 43942

I. **CANTERBURY COAL COMPANY**
125 Old Farm Drive
Pittsburgh, PA 15239

J. **COAL RESOURCES HOLDINGS CO.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

K. **COAL RESOURCES, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

L. **CONSOLIDATED LAND COMPANY**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

M. **ENERGY RESOURCES, INC.**
P. O. Box 259
R. D.#2, Fermantown Road
Brockway, PA 15824

N. **KENAMERICAN RESOURCES, INC.**
101 Prosperous Place, Suite 125
Lexington, Kentucky 40509

O. **MAPLE CREEK MINING, INC.**
981 Route 917
Bentleyville, Pennsylvania 15314

P. **MILL CREEK MINING COMPANY**
P. O. Box 259
R. D. #2, Fermantown Road
Brockway, PA 15824

Q. **MONVALLEY TRANSPORTATION CENTER, INC.**
P. O. Box 135
1060 Ohio Avenue
Glassport, Pennsylvania 15045

R. **OHIOAMERICAN ENERGY INCORPORATED**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

S. **THE OHIO VALLEY COAL COMPANY**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

T. **OHIO VALLEY RESOURCES, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

U. **THE OHIO VALLEY TRANSLOADING COMPANY**
56854 Pleasant Ridge Road
Alledonia, Ohio 43902

V. **THE OKLAHOMA COAL COMPANY**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

W. **ONEIDA COAL COMPANY, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

X. **PENNAMERICAN COAL, INC.**
125 Old Farm Drive
Pittsburgh, PA 15239

Y. **PENNAMERICAN COAL LP**
125 Old Farm Drive
Pittsburgh, PA 15239

Z. **PENNSYLVANIA TRANSLOADING, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio

AA. **PINSKI CORP.**
125 Old Farm Drive
Pittsburgh, PA 15239

BB. **SPRING CHURCH COAL COMPANY**
125 Old Farm Drive
Pittsburgh, PA 15239

CC. **SUNBURST RESOURCES, INC.**
586 National Road
Wheeling, West Virginia 26003

DD. **TDK COAL SALES, INCORPORATED**
P. O. Box 259
R. D. #2, Fermantown Road
Brockway, PA 15824

EE. **UMCO ENERGY, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

FF. **WEST VIRGINIA RESOURCES, INC.**
953 National Road, Suite 207
Wheeling, West Virginia 26003

GG. **WYAMERICAN ENERGY, INC.**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

A. AMCOAL HOLDINGS, INC.
101 Prosperous Place, Suite 125
Lexington, Kentucky 40509

Officers:

Robert E. Murray	President	5/23/03
P. Bruce Hill	Vice President – Human Resources	10/01/98
Robert D. Moore	Treasurer	10/01/98
Michael O. McKown	Secretary	3/1/05
Jeffrey L. Cash	Assistant Treasurer	11/01/99

Incorporation Information:

State of Incorporation: Ohio;
Charter No. 1007981

Date of Incorporation: June 12, 1998

ID #34-1867389

Shareholders: Murray Energy Corporation

Directors: Robert E. Murray

Revised 2/14/05

B. THE AMERICAN COAL COMPANY
P. O. Box 727
Harrisburg, Illinois 62946

Officers:

Robert E. Murray	Acting President	11/02/02
John R. Forrelli	Vice President	9/07/04
Michael O. McKown	Vice President, General Counsel and Secretary	3/15/99 3/1/05
Robert D. Moore	Treasurer	10/01/98
Jeffrey L. Cash	Assistant Treasurer and Assistant Secretary	11/01/99 6/01/01

Incorporation Information:

State of Incorporation	Delaware; Charter No. 2881631
Date of Incorporation	June 2, 1998
ID #73-1543124	
Shareholders:	AmCoal Holdings, Inc.
Directors:	Robert E. Murray

Revised: 2/14/05

C. THE AMERICAN COAL SALES COMPANY

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Robert E. Murray	Chief Executive Officer	11/11/88	
B. J. Cornelius	President	9/08/95	
Edwin D. Lane	Vice President	11/01/99	3/1/05
William E. Hollars	Vice President	3/1/05	
Richard Rice	Vice President	11/11/88	11/01/99
Michael O. McKown	Secretary	3/1/05	
Steven C. Ellis	Secretary	11/10/88	3/1/05
James R. Turner, Jr.	Treasurer and Assistant Secretary	3/1/05	
Duane A. Smith	Assistant Treasurer and Assistant Secretary	6/25/01 6/25/01	
Brenda L. Murray	Assistant Secretary	9/8/95	6/25/01

Incorporation Information:

State of Incorporation	Ohio; Charter No. 727836
Date of Incorporation	June 29, 1988
ID #34-1603699	

Shareholder:	Coal Resources, Inc.	
Directors:	Robert E. Murray	9/08/95

Revised
5/2/07

D. AMERICAN COMPLIANCE COAL, INC.
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Stanley T. Piasecki	President	3/1/05	
Charles E. Shestak	Vice President	03/10/03	
Michael O. McKown	Secretary	3/1/05	
Robert D. Moore	Treasurer and	6/25/01	
	Assistant Secretary	6/25/01	
Elmer A. Mottillo	Assistant Treasurer	8/22/03	

Former Officers:

Clyde I. Borrell	President	6/02/97	3/1/05
William W. Taft	Secretary	5/24/94	3/1/05

Incorporation Information:

State of Incorporation	Colorado; Charter No. 19941059260
Date of Incorporation	May 24, 1994
ID #34-1797161	

Shareholder:	Murray Energy Corporation (100%)	6/1/01	
	Robert E. Murray	5/24/94	2/23/01
Director:	Robert E. Murray	5/24/94	

Revised
5/2/07

E. AMERICAN ENERGY CORPORATION
43521 Mayhugh Hill Road
Township Highway 88
Beallsville, Ohio 43716

Officers:

		Begin	End
Robert E. Murray	President	12/15/04	
Robert D. Moore	President	6/25/01	12/15/04
Michael O. McKown	Secretary	11/01/99	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Treasurer	6/25/01	12/15/04
Robert L. Putsock	Assistant Treasurer	1/27/04	

Incorporation Information:

State of Incorporation — Ohio;
Charter No. 00842695

Date of Incorporation — April 12, 1993
ID #31-1550443

Shareholder: — Murray Energy Corporation
(100%)

Director:

Robert E. Murray	12/15/04	
P. Bruce Hill	7/02/01	12/15/04

Revised
3/16/07

F. ANCHOR LONGWALL AND REBUILD, INC.
One Industrial Park Drive
Wheeling, West Virginia 26003

Officers:

		Begin	End
P. Bruce Hill	President and	2/16/99	11/10/06
	Assistant Secretary	2/16/99	
Chad Underkoffler	President	11/10/06	
Michael O. McKown	Secretary	11/01/99	
James R. Turner, Jr.	Treasurer	9/16/05	
Duane A. Smith	Assistant Secretary	11/01/99	

Incorporation Information:

State of Incorporation	West Virginia; Charter No. 00961100093212818
Date of Incorporation	April 18, 1996
ID #55-0749933	

Shareholder: I.D. # 34-1586390 Address: 29325 Chagrin Boulevard Suite 300 Pepper Pike, OH 44122	Coal Resources, Inc.

Director:	Charles E. Shestak	11/01/99
	P. Keith McGilton	11/01/99

Revised
3/6/07

G. AVONMORE RAIL LOADING, INC.
125 Old Farm Drive,
Pittsburgh, PA 15239

Officers:

VACANT	President	
Robert D. Moore	Treasurer	6/25/01
Michael O. McKown	Secretary	3/1/05
Robert L. Putsock	Assistant Treasurer	1/02/03
Elmer A. Mottillo	Assistant Secretary	1/02/03

Incorporation Information:

State of Incorporation	Delaware; Charter No. 0798860
Date of Incorporation Qualified	February 19, 1974 May 6, 1974 Pennsylvania; PA Entity #000302999

ID #25-1253970

Shareholder:	Mill Creek Mining Company
Director:	Charles E. Shestak

Revised: 2/14/05

H. BELMONT COAL, INC.
P. O. Box 146
Powhatan, Ohio 43942

Officers:

		Begin	End
Robert D. Moore	President	6/25/01	
Maynard St. John	Vice-President	1/02/02	6/26/02
James R. Turner, Jr.	Secretary/Treasurer	9/16/05	
Kristi D. Brown	Secretary/Treasurer	11/08/01	9/16/05

Incorporation Information:

State of Incorporation	Ohio; Charter No. 00842697		
Date of Incorporation	April 12, 1993		
ID #31-1536602			
Shareholder:	Murray Energy Corporation (100%)	6/1/01	
	Robert E. Murray	4/19/93	6/1/01
Director:	Duane A. Smith	4/12/93	12/15/06
	Robert D. Moore	12/15/06	

Revised
3/6/07

I. CANTERBURY COAL COMPANY

125 Old Farm Drive
Pittsburgh, PA 15239

Officers:

Robert D. Moore	President & Treasurer	05/26/07
Michael O. McKown	Secretary	05/26/07
Robert L. Putsock	Asst Treasurer	01/2/03
James R. Turner, Jr.	Asst Secretary	06/1/08

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #000055242
Date of Incorporation	July 26, 1963
ID #25-1127473	

Shareholder:	Mill Creek Mining Company (100%)
Director:	Charles E. Shestak

Revised
3/6/07

J. COAL RESOURCES HOLDINGS CO.

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Robert E. Murray	President and CEO	6/27/03	
Michael D. Loiacono	Treasurer	6/27/03	
	CFO	12/20/05	04/23/07
Robert D. Moore	CFO	04/23/07	
Scott A. Boyle	Chief Financial Officer	10/29/05	12/20/05
P. Bruce Hill	Secretary	3/1/05	11/01/05
Michael O. McKown	Secretary	11/01/05	
Robert L. Putsock	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

Incorporation Information:

State of Incorporation: Delaware;
Charter No. 3676954

Date of Incorporation: June 27, 2003

ID #20-0100479

Shareholder:
Robert E. Murray (Class A Shares 100%)
Robert Eugene Murray (Class B Shares 20%)
Robert Edward Murray (Class B Shares 20%)
Ryan Michael Murray (Class B Shares 20%)
Jonathan Robert Murray (Class B Shares 20%)
Fifth Third Bank of Northeast Ohio, Trustee (Class B Shares 20%)

Director: Robert E. Murray 6/27/03

Revised
5/10/07

K. COAL RESOURCES, INC.
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Robert E. Murray	Chairman, President and Chief Executive Officer	3/1/05	
Michael D. Loiacono	Treasurer	1/28/05	
	CFO	12/20/05	04/23/07
Robert D. Moore	CFO	04/23/07	
Scott A. Boyle	Chief Financial Officer	10/17/05	12/20/05
P. Bruce Hill	Secretary	3/1/05	11/01/05
Michael O. McKown	Secretary	11/01/05	
Robert L. Putsock	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

Incorporation Information:

State of Incorporation: Ohio;
Charter No. 717546

Date of Incorporation: January 29, 1988

ID #34-1586390

Shareholder:	Coal Resources Holdings Co.	10/21/03	
	Robert E. Murray	1/29/88	10/21/03
Directors:	Robert E. Murray		
	Henry W. Fayne		
	Andrew Weissman		
	Richard L. Lawson		
	Michael D. Loiacono	12/20/05	04/23/07
	Robert D. Moore	04/23/07	

Revised
5/10/07

L. CONSOLIDATED LAND COMPANY

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

Robert D. Moore	President	8/11/04
Robert D. Moore	Treasurer and	6/25/01
	Assistant Secretary	6/25/01
Michael O. McKown	Secretary	3/1/05
Elmer A. Mottillo	Assistant Secretary	8/22/03

Incorporation Information:

State of Incorporation	Ohio; Charter No. 00842696	
Date of Incorporation	April 12, 1993	
ID #34-1769562		
Shareholder:	Murray Energy Corporation (100%)	6/1/01
Director:	Robert D. Moore	8/11/04

Revised
3/6/07

M. ENERGY RESOURCES, INC.
P. O. Box 259
R. D.#2, Fermantown Road
Brockway, PA 15824

Officers:

Stanley T. Piasecki	President and Chief Executive Officer	8/11/04
Elmer A. Mottillo	Treasurer	8/22/03
Michael O. McKown	Secretary	3/1/05
Charles E. Shestak	Assistant Secretary	4/30/93

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #762734
Date of Incorporation	September 14, 1982
ID #31-1044044	

Shareholder:	Mill Creek Mining Company	
Director:	Stanley T. Piasecki	8/11/04

Revised 2/14/05

N. KENAMERICAN RESOURCES, INC.
101 Prosperous Place, Suite 125
Lexington, Kentucky 40509

Officers:

		Begin	End
Robert N. Sandidge	President	12/16/06	
Dennis W. Bryant	President/Manager	10/1/05	12/16/06
B. J. Cornellius	Senior Vice-President--Sales	11/1/05	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Assistant Treasurer	3/1/05	
Michael O. McKown	Secretary	2/13/06	

Incorporation Information:

State of Incorporation	Kentucky; Charter No. 0331655
Date of Incorporation	June 9, 1994
ID #61-1264385	

Shareholder:	Mill Creek Mining Company	
Director:	Robert E. Murray	6/1/05

Revised
3/6/07

O. MAPLE CREEK MINING, INC.
981 Route 917
Bentleyville, Pennsylvania 15314

Officers:

		Begin	End
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Vice President and Treasurer	3/1/05	
Michael B. Gardner	Secretary	3/1/05	5/01/07
VACANT			
Roberta K. Heil	Assistant Secretary	11/01/99	

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #2607113
Date of Incorporation	November 9, 1994
ID #25-1755305	

Shareholder:	Sunburst Resources, Inc.	1/11/95
Director:	Robert E. Murray	

P. MILL CREEK MINING COMPANY

P. O. Box 259
R. D. #2, Fermantown Road
Brockway, PA 15824

Officers:

		Begin	End
Charles E. Shestak	President	8/18/98	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Treasurer	6/25/01	3/1/05
Robert D. Moore	Assistant Treasurer	3/1/05	
Michael O. McKown	Secretary	3/1/05	
Michael E. Elliott	Secretary	8-18-98	3/1/05
Robert L. Putsock	Assistant Secretary and	6/25/01	
	Assistant Treasurer	6/25/01	

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #0007447787
Date of Incorporation	December 1, 1981
Certificate of Amendment	July 7, 1988; #8854525

ID #31-1040986

Shareholder:	Coal Resources, Inc.	
Director:	Robert E. Murray	5/14/04

Revised
3/6/07

Q. MONVALLEY TRANSPORTATION CENTER, INC.
P. O. Box 135
1060 Ohio Avenue
Glassport, Pennsylvania 15045

Officers:

Paul B. Piccolini	President	4/28/06
James R. Turner, Jr.	Secretary and Treasurer	3/1/05

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #856918
Date of Incorporation	February 15, 1985

ID #25-1490495

Shareholders:	Pennsylvania Transloading, Inc.	
Directors:	Robert E. Murray and Michael D. Loiacono	11/01/99

R. OHIOAMERICAN ENERGY INCORPORATED
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

D. Michael Jamison	President	5/1/05
Michael O. McKown	Secretary	5/1/05
Robert D. Moore	Treasurer	5/1/05
Elmer A. Mottillo	Assistant Treasurer	6/30/06

Incorporation Information:

State of Incorporation	Ohio	
Date of Incorporation	February 1, 2005	
ID # 20-3044610	Ohio Charter No. 1518533	
Director:	Robert E. Murray	5/1/05
Shareholder:	Murray Energy Corporation	5/1/05

Revised
3/6/07

S. **THE OHIO VALLEY COAL COMPANY**
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Vacant	President	11/4/05	
Paul B. Piccolini	Vice President	1/1/07	
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael B. Gardner	Secretary	3/1/05	5/01/07
Roberta K. Heil	Assistant Secretary	11/01/99	
Bonnie M. Froehlich	Assistant Secretary and	6/25/01	
	Assistant Treasurer	6/25/01	

Incorporation Information:

State of Incorporation	Ohio; Charter No. 384971
Date of Incorporation	June 6, 1969
Certificate of Amendment	October 4, 1988; #201274

ID #34-1041310

Shareholder:	Ohio Valley Resources, Inc.
Director:	Robert E. Murray

Revised
5/2/07

T. OHIO VALLEY RESOURCES, INC.

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Paul B. Piccolini	President	4/28/06	
John Forrelli	President	11/1/99	4/28/06
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael D. Loiacono	Treasurer, Assistant Secretary and Corporate Comptroller	3/10/95	4/28/06
VACANT	Secretary	3/1/05	05/01/07
Stephen Ellis	Secretary	3/10/95	3/1/05

Incorporation Information:

State of Incorporation	Ohio; Charter No. 721514
Date of Incorporation	March 29, 1988
ID #34-1586391	

Shareholders:	Murray Energy Corporation (100%)	6/1/01	
	Robert E. Murray	3/10/95	6/1/01
Director:	Robert E. Murray		

Revised
3/6/07

U. THE OHIO VALLEY TRANSLOADING COMPANY

56854 Pleasant Ridge Road
Alledonia, Ohio 43902

Officers:

		Begin	End
Vacant	President	11/4/05	
Paul B. Piccolini	Vice-President	1/1/07	
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael B. Gardner	Secretary	3/1/05	05/01/07
Roberta K. Heil	Assistant Secretary	9/01/00	

Incorporation Information:

State of Incorporation	Ohio; Charter No. 727835
Date of Incorporation	June 29, 1988
ID #34-1611209	

Shareholder:	Ohio Valley Resources, Inc.	
Director:	Robert E. Murray	4/06/93

Revised
3/6/07

V. THE OKLAHOMA COAL COMPANY

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Paul B. Piccolini	President	4/28/06	
Gregory C. Smith	President	11/1/99	4/28/06
Michael O. McKown	Secretary	3/1/05	
Gregory A. Gorospe	Secretary	9/15/94	11/1/99
James R. Turner, Jr.	Treasurer and Assistant Secretary	3/1/05	
Kathleen Bednarek	Treasurer	6/20/00	6/26/00
Robert L. Putsock	Assistant Secretary	1/10/03	
Kathleen Bednarek	Assistant Secretary	9/3/96	6/26/00

Incorporation Information:

State of Incorporation	Oklahoma; Charter No. DB00477836
Date of Incorporation	April 17, 1989
Licensed in Ohio	February 27, 1991; FL 790739
ID #34-1673480	
Shareholder:	The American Coal Sales Company
Director:	Robert E. Murray

Revised
3/6/07

W. ONEIDA COAL COMPANY, INC.

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Robert D. Moore	President and	06/25/01	
	Treasurer	11/01/99	
Robert L. Putsock	Assistant Secretary	06/25/01	
Michael O. McKown	Secretary	03/1/05	

Former Officers:

John Blaine Earles	Vice-President	2/28/92	7/2/93
Tivis Arnold Graybeal	Secretary	2/28/92	4/28/94
Anthony Carl Laplaca	Secretary	4/28/94	11/1/99
Joseph R. Bourgo	Vice-President	9/1/92	10/20/00
Joseph R. Bourgo	Treasurer	4/28/94	10/20/00
Norma Jean Mccourt	Assistant Secretary	4/28/94	11/1/99

Incorporation Information:

State of Incorporation: West Virginia; Charter No. 00000020004097TAX

Date of Incorporation: August 29, 1983

ID #62-1011712

Shareholder:	West Virginia Resources, Inc. (100%)	2/28/92	
Daryl Napier			02/28/92

Director: Robert E. Murray

Revised 5/2/07

X. PENNAMERICAN COAL, INC.

125 Old Farm Drive
Pittsburgh, PA 15239

Officers:

Robert D. Moore	President, Treasurer and	6/25/01
	Secretary	6/25/01
Robert L. Putsock	Assistant Secretary	6/25/01

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #2545905
Date of Incorporation	September 13, 1993

ID #25-1722115

Shareholder:	Mill Creek Mining Co.	11/08/93
Director:	Robert E. Murray	

Revised 2/14/05

Y. PENNAMERICAN COAL LP

125 Old Farm Drive
Pittsburgh, PA 15239

Partners:

Pinski Corp.	Managing Partner	8/19/96
PennAmerican Coal, Inc.	Limited Partner	7/8/98

EIN# 25-1800809
Partnership Effective 7/8/98

Revised
3/6/07

Z. PENNSYLVANIA TRANSLOADING, INC.

29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

Paul B. Piccolini	President	4/28/06
James R. Turner, Jr.	Treasurer	3/1/05
Michael O. McKown	Secretary	3/1/05

Incorporation Information:

State of Incorporation	Ohio; Charter No. 736747
Date of Incorporation	November 18, 1988
Qualified:	Pennsylvania; December 28, 1988
Certificate of Authority	No. 8898868
ID #34-1603748	

Shareholder:	Sunburst Resources, Inc. (100%)	04/01/96
Director:	Robert E. Murray	

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Revised
5/10/07

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[1] Sunburst Resources, Inc. has always been a shareholder and has no relation to Consolidated Land Company.

AA. PINSKI CORP.
125 Old Farm Drive
Pittsburgh, PA 15239

Officers:

VACANT	President and General Manager	
Robert D. Moore	Treasurer and Secretary	6/25/01 6/25/01
Robert L. Putsock	Assistant Treasurer and Assistant Secretary	6/25/01 6/25/01

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #002710766
Date of Incorporation	August 19, 1996
ID #25-1800870	
Shareholder:	PennAmerican Coal, Inc.
Director:	Charles E. Shestak

Revised 2/14/05

BB. SPRING CHURCH COAL COMPANY
125 Old Farm Drive
Pittsburgh, PA 15239

Officers:

Robert D. Moore	President	05/26/07
Robert S. Moore	Treasurer	06/25/01
Michael O. McKown	Secretary	05/26/07
Robert L. Putsock	Asst Treasurer	01/02/03
James R. Turner, Jr.	Asst Secretary	06/01/08

Incorporation Information:

State of Incorporation — Pennsylvania;
PA Entity #000696663

Date of Incorporation — November 2, 1979

ID #25-1372128

Shareholder: Mill Creek Mining Company

Director: Charles E. Shestak

Revised: 2/14/05

CC. SUNBURST RESOURCES, INC.
586 National Road
Wheeling, West Virginia 26003

Officers:

		Begin	End
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Treasurer	3/1/05	
Michael B. Gardner	Secretary	3/1/05	05/01/07

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #2616384
Date of Incorporation	January 10, 1995
ID #25-1766427	

Shareholder:	Ohio Valley Resources, Inc.	4/01/97
Director:	Robert E. Murray	

Revised
3/7/07

DD. TDK COAL SALES, INCORPORATED
P. O. Box 259
R. D. #2, Fermantown Road
Brockway, PA 15824

Officers:

Stanley T. Piasecki	President and Chief Executive Officer	8/11/04
Elmer A. Mottillo	Treasurer	8/22/03
Michael O. McKown	Secretary	3/1/05
Charles E. Shestak	Assistant Secretary	2/01/99

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #00758582
Date of Incorporation	June 28, 1982
ID #25-1422374	

Shareholder:	Energy Resources, Inc.	
Director:	Stanley T. Piasecki	8/11/04

Revised: 02/14/05

EE. UMCO ENERGY, INC.
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

		Begin	End
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Treasurer and Assistant Secretary	3/1/05	
Michael B. Gardner	Secretary	3/1/05	05/01/07
	Vice-President	5/3/06	

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #1072295
Date of Incorporation	December 29, 1988
ID #52-1615668	
Shareholder:	Maple Creek Mining, Inc. and Toni J. Southern
Director:	Robert E. Murray

Revised
3/6/07

FF. WEST VIRGINIA RESOURCES, INC.
953 National Road, Suite 207
Wheeling, West Virginia 26003

Officers:

		Begin	End
Neil Kok	President	10/2/06	
Robert D. Moore	President	10/20/00	10/20/00
Robert E. Murray	President, CEO	12/27/91	10/20/00
Anne Besece	Treasurer and Secretary	10/2/06	
Robert L. Putsock	Treasurer and	6/25/01	10/2/06
	Assistant Secretary	6/25/01	
Robert E. Murray	Treasurer	12/27/91	6/25/01
Michael O. McKown	Secretary	3/1/05	10/2/06
Anthony Carl Laplaca	Secretary	12/27/91	3/1/05

Incorporation Information:

State of Incorporation: West Virginia;
Charter No.
00913610154813604

Date of Incorporation: December 27, 1991

ID #55-0713676

Shareholder: Mill Creek Mining Company (100%) 12/27/91

Director: Robert E. Murray

Revised
3/6/07

GG. WYAMERICAN ENERGY, INC.
29325 Chagrin Boulevard, Suite 300
Pepper Pike, Ohio 44122

Officers:

Robert D. Moore	President, Treasurer and Secretary	5/3/06

Incorporation Information:

State of Incorporation	Wyoming; Charter No. 1998003378171
Date of Incorporation	September 22, 1998

ID #34-1875051

Shareholder:	Murray Energy Corporation
Director:	Robert E. Murray

Revised
3/7/07

APPENDIX 1, PART 3

VIOLATION INFORMATION

VIOLATION INFORMATION

Information updated to November 25 , 2009

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Centennial		007/019	42-01750 42-01474 42-02028 42-01864

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
9/27/2006	10000	DOGM			Failure to renew	9/29/2006	terminated	N
10/6/2006	10002	DOGM			Failure to submit fan plan	12/4/2006	terminated	N
2/7/2007	10003	DOGM			Non coal Waste	2/12/2007	terminted	N
7/6/2007	10007	DOGM			Vehicle in ditch	7/06/07	terminated	N
8/27/2007	10008	DOGM			vehicle in ditch	8/28/2007	terminated	N
8/27/2007	10009	DOGM			no sed pond inspection	8/27/07	terminated	N
6/18/2007	10024	DOGM			non coal waste	6/18.08	terminated	N
10/28/2008	10030	DOGM			guard shack		terminated	N
1/21/09	10032	DOGM			Rocks in ditch		Term	N
7/2/09	10040	DOGM			Failure to maintain sediment control, GVH			N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Crandall		015/032	42-01715

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
8/19/2004	Nov4-49-4-1	DOGM			Parking in Forest	Term	moved vehicle	N
9/13/2004	Nov4-49-5-1	DOGM			non-coal waste	Term	moved waste	N
9/8/2005	Nov5-49-2-1	DOGM			Failure annual subsidene	Term		N
10/4/2006	#10001	DOGM			Culvet Plugged	TErm	Unplugged	N
9/6/2007	10014	DOGM			no sed pond inspection	TERM	Inspected	N
9/10/2007	10015	DOGM			plugged culvert	term	unplugged	N
1/14/2008	10016	DOGM			mine water stored in pond	Term	rerouted water	N
1/14/2008	10017	DOGM			grvity flow fro m portals	Term	stopped flow	N
2/06/2008	10019	DOGM			failure to request permit renewal	Term	submitted renewal	N
5/28/2008	10021	DOGM			Plugged culverts	Term	Unplugged	N
5/28/2008	10022	DOGM			Failure to maintain silt fence	Term	Cleaned fence	N
8/10/2009	10043	DOGM			High iron discharge in Crandall Creek			N
8/10/2009	10044	DOGM			No macroinvertebrate studies			N
10/29/2009	10046	DOGM			Failure to clean out sediment pond			N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
West Ridge		007/041	42-02233

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
1/22/2004	Nov4-49-1-1	DOGM			Failure to request renewal	Term		N
4/6/2005	Nov5-39-1-1	DOGM			Failure to submit 4qtr water	Term		N
7/31/2008	10025	DOGM			coal pushed on topsoil	Term		N
1/29/2009	10033	DOGM			sediment in stream	Pending		N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Horse Cyn.		007/013	42-00100

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
3/17/2009	10035	DOGM		007/013	failure to change bond	term		N
3/19/2009	10036	DOGM			working in closure period	pending		Y

Name of Operation			Identifying number for operation			Federal or State Permit Number	MSHA ID Number
Canterbury Coal Inc.			644			D-024-1/S-1020	3600813/3605708
Date Issued	**Violation Number**	**Name of Issuing Agency**	**Person Issued To**	**Permit Number**	**Brief Description of Violation**	**Abatement Action**	**Appeal Y or N**
5/13/2004	143419	PADEP		3743701	90.124		N
7/29/2004	165278	PADEP		3743701	90.106		N
7/29/2004	165278	PADEP		3743701	90.152		N
7/29/2004	169136	PADEP		3743701	90.152		N
7/29/2004	165279	PADEP		3743701	89.68		N
7/29/2004	165279	PADEP		3743701	89.83		N
8/13/2004	169138	PADEP		3743701	90.124		N
9/7/2004	169139	PADEP		3743701	89.81		N
5/13/2004	143416	PADEP		3743701	86.13 CO		N
6/15/2004	145872	PADEP		3743701	89.52 CO		N
2/8/2005	182734	PADEP		3743701	90.124		N
8/5/2005	199322	PADEP		3743701	90.159		N

Name of Operation			Identifying number for operation				Federal or State Permit Number	MSHA ID Number
UMCO			74645				PA 63921301	3608375
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
9/1/2004	426787	DMRM		63921301	86.13	No resolution		N
9/3/2004	426786	DMRM		63921301	89.142a(b)	No resolution		N
9/20/2004	427936	DMRM		63921301	89.142a(b)	No resolution		N
1/4/2005	445603	Air Quality		63921301	25.127.25	ADM. Close Out		N
1/13/2005	445603	Air Quality		63921301	25.127.25	ADM Close Out		N
3/18/2005	445603	Air Quality		63921301	25.127.25	ADM Close Out		N
6/10/2005	466153	DEP		63921301	25.89.21	No resolution		N
7/15/2005	448412	DEP		63921301	25.89.68	Abated		N
7/15/2005	448413	DEP		63921301	25.89.83(a)	Abated		N
10/10/2006	499479	PADEP		63921301	89.142a(f)	No resolution		Y

Name of Operation			Identifying number for operation				Federal or State Permit Number	MSHA ID Number
Maple Creek			4244				63723707	36-00970
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
5/7/2004	394440	MCM		63841302	89.142A.F.1	Abated		N
5/12/2004	394880	MCM		63841302	89.142A.F.1	No resolution		N
5/13/2004	395344	MCM		63841302	89.142A.F.1	No resolution		N
5/13/2004	395345	MCM		63841302	89.142A.F.1V	No resolution		N
5/13/2004	395346	MCM		63841302	89.142A.E	Abated		N
5/7/2004	394440	MCM		63841302	89.142A.F.1	Abated		N
7/7/2004	401714	MCM		63841302	89.142A.F.1	No resolution		N
7/30/2004	421806	MCM		63841302	SMCRA.18.6	Abated		N
8/26/2004	425804	MCM		63841302	89.142A.F.1	No resolution		N
8/13/2004	426148	MCM		63723707	86.13	Abated		N
9/8/2004	427302	MCM		63723707	90.102	Abated		N
9/10/2004	427564	MCM		63723707	90.102	Abated		N
9/13/2004	427565	MCM		63723707	90.102	Abated		N
9/14/2004	427566	MCM		63723707	90.102	Abated		N
9/14/2004	427567	MCM		63723707	90.112	Abated		N
10/19/2004	432068	MCM		63723707	90.102	Abated		N
7/29/2005	469866	DEP		63723707	89.142a(b)(1)(iii)	No Resolution		N
12/1/2005	478486	PADEP		63841302	89.145a(b)	No Resolution		N
12/1/2005	478487	PADEP		63841302	89.145a(f)(1)(v)	No Resolution		N
12/1/2005	478488	PADEP		63841302	89.145a(b)	No Resolution		N
1/9/2006	480660	PADEP		63841302	1396.18(f)	Abated		N
6/12/2006	491619	PADEP		6381302	89.142a(e)	No Resolution		Y

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
PENNAMERICAN COAL LP	93081	32951301	36-00970

Kim Betcher

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Ohio American Coal, Inc.	N/A	N/A	3304550/3304569

Kim Betcher

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
8/9/2006	21861	ODNR	OAEI	D-2180	outside of permit bndry	Abadted	IBR	N
3/1/2007	13101	ODNR	OAEI	D-2291	mining without a permit	Abadted	Permit issued	N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Energy Resources, Inc.	470	License # 1465	360 269 5

Charlie Shestak

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
5/11/2004	143258	PaDEP	ERI	24010101	87.147	Abated	Corrected	N
8/26/2004	167665	PaDEP	ERI	24010101	87.140	Abated	Corrected	N
8/30/2004	168590	PaDEP	ERI	24970102	87.147	Abated	Corrected	N
7/6/2004	147120	PaDEP	ERI	33901602	89.52	Abated	Corrected	N
7/31/2006	211989	PaDEP	ERI	17841607	86.152	Abated	Corrected	N
4/11/2006	486936	PaDEP	ERI	17930120	87.157	Abated	Corrected	N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
TDK Coal Sales, Inc.	27182	17910124	3608867

Charlie Shestak

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
5/13/2004	143257	PaDEP	TDK	24970104	87.147	Abated	Waved	N
6/1/2004	144659	PaDEP	TDK	03940101	87.148	Abated	Corrected	N
9/15/2004	169382	PaDEP	TDK	03940102	87.106	Abated	Corrected	N
9/20/2004	169388	PaDEP	TDK	24970104	87.14	Abated	Corrected	N
10/7/2004	170575	PaDEP	TDK	24970104	87.106	Abated	Corrected	N
4/11/2006	486945	PaDEP	TDK	17900143	87.157	Abated	Corrected	N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
Belmont Coal Company		D-0241/D-1020	33-04397/33-03048

David Bartsch

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
2/24/2004	24541	DMR	Mine	D-0241	Gullies exis in regraded	Terminated	regraded	N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
The Ohio Valley Coal Co.	Powhatan No. 6 Mine	State – D-0360	33-01159

David Bartsch

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
8/2/2004	19662	DMRM	Mine	D-0360	Failure to maintain sediment control	Terminated	Cleaned Ditch	N
5/23/2006	19656	DMRM	Mine	D-0360	Failure to maintain the perimeter of diversion ditch	Terminated	Cleaned Ditch	N
11/30/2006	28473	DMRM	Mine	D-0360	Undirected Drainage	Terminated	Cleaned Ditch	N
11/30/2006	28484	DMRM	Mine	D-0360	Coal Blocking Diversion Ditch	Terminated	Cleaned Ditch	N

Name of Operation			Identifying number for operation				Federal or State Permit Number	MSHA ID Number
American Energy Corp							D-0425	33-01070
Date Issued	**Violation Number**	**Name of Issuing Agency**	**Person Issued To**	**Permit Number**	**Brief Description of Violation**	**Status (Abated, Term. etc.)**	**Abatement Action**	**Appeal Y or N**
1/25/2005	21807	ODNR		D-0425	subsided residnet ran out of water	Terminated	filled tank with water	N
4/27/2005	19696	ODNR		D-0425	Coal located outside stockpile area	Terminated	cleaned coal	N
4/29/2005	19695	ODNR		D-0425	Maintenance on pond 018	Terminated	cleaned out pond	N
4/27/2005	19697	ODNR		D-0425	drainage from property not entering sumps	Terminated	construct sumps	N
10/3/2005	21871	ODNR		D-0425	Failure to sub specific repairs (landowner)	Active		N
6/15/2006	21860	ODNR		D-1159	Segregate Prim Farmland soils	Active	Waiting on ODNR, All information submitted	N
Aug-05	CO-1726	ODNR		D-0425	Uncontroled discharge (Slurry)	Avtive	Will submit revised Plan Mid Month	N

Name of Operation			Identifying number for operation				Federal or State Permit Number	MSHA ID Number
The American Coal Co.			Galatia Mine & Millennium Portal				IDNR Mining Permit #2 and #352	11-02752
Date Issued	**Violation Number**	**Name of Issuing Agency**	**Person Issued To**	**Permit Number**	**Brief Description of Violation**	**Status (Abated, Term. etc.)**	**Abatement Action**	**Appeal Y or N**
9/27/2004	37-1-04	IDNR	DeNeal	Permit #2	Failure to submit groundwater report on schedule	Terminited		N
4/13/2005	37-01-05	IDNR	DeNeal	Permit #2	Failure to submit u/g mining maps	Terminited		N
5/12/2005	37-02-05	IDNR	DeNeal	Shadow Area 9	failure to complete subsidence mitigation in	Modified		N
					contemporaneous manner.			
6/1/2005	37-03-05	IDNR	DeNeal	352	broken waterline-failure to prevent minepumpage from passing through sediment pond before going offsite	Terminated		N

The following companies either did not have any violations in the last three years or do not have permits.

Oklahoma Coal Company

KenAmerican Resources, Inc.

Onieda Coal, Inc.

MonValley Transportation Center, Inc.

Mill Creek Mining Co.

Pinski Corp

American Compliance Coal Inc.

Coal Resources Inc.

PA Transloading, Inc.

West Virginia Resources Inc.

WildCat Loadout

American Coal Sales Co.

Hocking Valley Resources Co..

cessation, extent of sub-surface strata, prior reclamation efforts accomplished on the property, and identification of all backfilling, regrading, rEVEGATATION, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

Temporary closing of underground workings will be accomplished with chain link fence material as recommended by MSHA. This prevents access by unauthorized individuals during idol periods. It is not anticipated that once Andalex reaches its peak production that this will occur.

If underground openings are to remain inactive for a period greater than 90 days, such openings will be temporarily closed off from access. Such closures will consist of a chain link or other substantial wire mesh fabric fence placed over the portals to prevent public access while allowing for air flow. Locked gates may be installed in the portal to allow for mine inspection.

HISTORICAL NOTE: On June 11, 2008 the company requested permission from the BLM to modify the R2P2 to allow the mine to be temporarily idled due to economic factors. The BLM approved the modification on June 20, 2008. The portals were then sealed to prevent public access. The idle status has continued for more than 30 days. The surface facilities are secured by a security guard at all times. At the time of the temporary idling, the permit area included 6516.91 acres, and the total disturbed area included 52.64 acres (minesite = 34.2 acres, Left Fork fan and access road = 1.45 acres, and seventeen GVH sites = 17 acres). The subsurface strata extends from zero at the outcrop to more than 3000' under the northernmost longwall panels, and the horizontal extent of the subsurface strata over the permit area is about 21,432' measured north-south and about 21,768' measured east-west. There has been no reclamation done at the site as a result of the temporary closure, although two GVH sites were reclaimed in the meantime. There are no water treatment activity going on at the mine.

The normal required environmental monitoring has continued since the mine has been idled, including hydrologic monitoring of springs, seeps and wells, UPDES monitoring, subsidence monitoring, and raptor surveys. The UPDES outfall points continue to be monitored but there has been no reported flow since the mine was shut down and the pumps were shut off. Nearly all water in the mine was created from the floor strata as mining occurred, and would normally dry up after the mine advanced several hundred feet. None of the flow was attributed to geological structures such as faults or dikes. Since all mining was advancing down-dip the water had to be continually pumped out to the surface since there were no sumps constructed below the workings to collect and store the water. Now that mining has stopped there is no reason to believe that the floor strata will continue to make water, especially at the liberation rate of 800 gpm typical of the operational period. Also, since all the water was being made in the extreme down-dip section of the mine, the water that does continue out of the floor

will fill up the bottom of the mine until it reaches a level of potentiometric equilibrium. The portals are at the highest end of the mine, and are 1,640' vertically above the impounding area, and more than 14,000' vertically separated. This situation is very different than, for example the Crandall Mine where water is presently discharging from the portals. There, the mine is essentially flat and the source of the water is likely the Joe's Valley Fault which probably serves as a direct conduit for surface water draining through Joe's Valley above down to the mine workings. At the Tower Mine there is no primary recharge mechanism, and the vertical dip should serve to allow the water level to stabilize within the mine without discharging from the portals.

R645-301-515.310. TEMPORARY ABANDONMENT

See R645-301-515.300.

R645-301-515.311. SUPPORT AND MAINTENANCE

See R645-301-515.300.

R645-301-515.312. SECURING SURFACE FACILITIES

See R645-301-515.300.

R645-301-515.320. NOTICE OF INTENT TO CEASE OR ABANDON OPERATIONS

See R645-301-515.300.

R645-301-515.321. STATEMENT OF CONDITIONS PRIOR TO CESSATION OR ABANDONMENT, UNDERGROUND

See R645-301-515.300.

R645-301-515.322. STATEMENT OF CONDITIONS PRIOR TO CESSATION OR ABANDONMENT, SURFACE

See R645-301-515.300.

R645-301-516. PREVENTION OF SLIDES

Andalex has agreed to interim stabilization of all slopes and embankments within the disturbed area and has done so. One slope located at the bottom of the office driveway, has been attempted

separate occasions. No significant erosion problems have occurred, Andalex will notify the Division in the event of any slides or other damage.

R645-301-520. OPERATION PLAN

R645-301-521. GENERAL

Requirements for Reclamation and Operation Plan

Operation Plan: General Requirements

Andalex Resources, Inc. has added 802 acres in the AEP lease #UTU 69600 to its currently approved Centennial Project. The lease contains 3.0 million tons of recoverable coal in the Centennial and Aberdeen Seams. All reserves will be mined simply as an underground extension of the existing, approved, and currently operating Pinnacle and Aberdeen Mines. As such, no additional surface facilities are required. Access to and handling and extraction of all coal will be through the existing Pinnacle and Aberdeen Mines.

All necessary surface and support facilities have been constructed, approved, and are currently in operation for the Pinnacle, Apex and Aberdeen Mines. There will be no change in the currently approved Environmental Protection Plan.

Overview of Project

Type of Mine

The initial underground mining operation known as the Pinnacle Mine, located on the Zion's fee property, began production on October 3, 1980. It consisted of a single unit's production with an output projected to be approximately 200,000 tons per year and with 20 employees. The mine moved onto the federal leases and with the addition of the Apex Mine in 1982, the Centennial Project now has a production capacity of 1,200,000 tons per year. As there are four minable seams present, the Aberdeen, Gilson, Centennial, and Lower Sunnyside, in ascending order, mining plans call for simultaneous operation of a mine in each seam. The existing operations are in all four seams. The Centennial Seam has been accessed via rock tunnels from the existing Pinnacle Mines (Gilson Seam).

Mining will consist of the underground method of coal extraction using continuous miners and longwall. Room and pillar longwall panel development will be employed with final overall extraction estimated to be about 80 percent of the reserve.

Coal is presently being loaded into 40-ton coal trucks and hauled to Wildcat Jct. near Helper. All seams will be mined using continuous miners and longwall extraction. Because there is deep

cover over the reserves on portions of the Graves Lease, it is likely that first mining only will be possible. Please refer to Plate 26, 27, 28, & 29 which show depth of cover over the seams.

Area of Operations

Mine Plan Area

The mine plan area is limited to and contained within the proposed permit area. Mine plans for each of the minable seams are included as Plates 29, 30, 31 and 41.

Permit Area

The permit area consists of seven federal leases and two fee leases, all controlled by Andalex Resources. The Hoffman Creek federal coal Lease (U-52341) has been relinquished although the acreage still remains in the permit area. Presently, mining operations are taking place on five federal coal leases. Federal leases are U-010581, SL-027304, SL-063058, #U-05067 and UTU-66060. These leases are shown on Plate 4. Mining commenced on #U-05067 in July of 1989. Mining commenced on #UTU-66060 in late 1990. Mining will commence on UTU-69600 in June of 1993.

Disturbed Surface Area

Surface disturbances are minimal due to the nature of the mining activities. The permit area has been previously impacted by mining. Surface disturbances will be limited to the existing facilities which have been constructed. The total existing surface area disturbed is 34.2 acres. Existing facilities are indicated on Plate 6 and 7.

The land affected by mining operations which shall be reclaimed, in compliance with the Mining and Reclamation Plan and all requirements of the Mined Land Reclamation Act and Rules and Regulations adopted in accordance therewith, can be described as follows:

34.2 acres located in T13S, R11E, S.L.B.&M., Carbon County, Utah and contained within,
SE 1/4 SW 1/4 Section 7
NE 1/4 SW 1/4 Section 7
SW 1/4 SE 1/4 Section 7
NW 1/4 SE 1/4 Section 7
SW 1/4 NE 1/4 Section 7
NE 1/4 NW 1/4 Section 18
NW 1/4 NE 1/4 Section 18

Reserves, Production, and Life of Mine

Andalex's most recent reserve estimates, using the longwall mining method, are calculated at 23 million recoverable tons. This includes all seams on all leases.

If the extraction rate of 1.5 million tons is accomplished

according to schedule, the project life will be about 15 years. The theoretical life could be closer to 25 years however due to the existence of unleased federal coal logically accessible through only the existing and future Andalex mine workings.

R645-301-521.100. CROSS SECTIONS AND MAPS

See R645-301-510, Volume II

R645-301-532.110. PREVIOUSLY MINED AREAS

See R645-301-510, Volume II

R645-301-521.111. LOCATION AND EXTENT OF KNOWN WORKINGS

See R645-301-510, Volume II

R645-301-521.112. EXISTING OR PREVIOUSLY SURFACE MINED AREAS

N/A

R645-301-521.120. EXISTING SURFACE AND SUBSURFACE FACILITIES AND FEATURES

See R645-301-510.

R645-301-521.121. BUILDINGS IN AND WITHIN 1000 FEET OF THE PERMIT AREA

There are no buildings within 1,000 feet of the permit area except those used as part of the mining operation. They are shown on Plates 6 and 7.

R645-301-521.122. SURFACE AND SUBSURFACE MAN-MADE FEATURES WITHIN THE PERMIT AREA

There are no surface or subsurface man-made features within, passing through or passing over the permit area except the powerline, telephone cables, culverts, and etc., installed for the operation of this mine. See Plates 6 and 7 for their locations.

R645-301-521.123. PUBLIC ROADS IN OR WITHIN 100 FEET OF THE PERMIT AREA

County Road 299 starts at highway 6 in Price and terminates at Andalex Resources' minesite (Plate 1).

R645-301-521.124. EXISTING FACILITIES WITHIN THE

PERMIT AREAS

There are no surface or subsurface man-made features within, passing through or passing over the permit area except the powerline, telephone cables, culverts, and etc., installed for the operation of this mine. See Plates 6 and 7 for their locations.

R645-301-521.125. SEDIMENTATION PONDS AND IMPOUNDMENTS

See R645-301-512.240.

R645-301-521.130. LANDOWNERS AND RIGHT OF ENTRY AND PUBLIC INTEREST MAPS

The leases for which we have the legal right of entry are shown on Plate 4. See Appendix R.

R645-301-521.131. SURFACE AND SUBSURFACE OWNERS

Owners of Record of Surface and Subsurface Contiguous Areas

Names and addresses of all owners of record for all surface and subsurface areas contiguous to and within the permit area are listed below and indicated on Plates 2 and 3.

Subsurface Owners

Franklin Real Estate Company (American Electric Power)
#2 Broadway
New York, New York (contiguous)

Bureau of Land Management
Utah State Office
136 East South Temple
Salt Lake City, Utah 84111 (contiguous & within)

State of Utah
School Trust Lands Administration
355 West North Temple
3 Triad Center, Suite 400
Salt Lake City, Utah 84180 (contiguous)

Andalex Resources, Inc.
PO Box 902
Price, Utah 84501 (within)

Sunedco Coal Company
7401 West Mansfield Avenue
Suite 418
P.O. Box 35-B
Lakewood, Colorado 80235 (contiguous & within)

Zion Security Corp.
10 East South Temple
Salt Lake City, Utah 84111 (within)

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501 (contiguous & within)

Surface Owners

Bureau of Land Management
Utah State Office
136 East South Temple
Salt Lake City, Utah 84111 (contiguous & within)

Gladys R. Artman
P.O. Box 22
Mountain City, Georgia 30562 (contiguous & within)
F. and D. Shimmin
711 North 5th East
Price, Utah 84501 (contiguous)

Sunedco Coal Company
7401 West Mansfield Avenue
Suite 418
P.O. Box 35-B
Lakewood, Colorado 80235 (contiguous & within)

R. and E. Nelson
583 Sundial Drive
Moab, Utah 84532 (within)

D. Mathis
Sunnyside Star Route
Price, Utah 84501 (contiguous & within)

J & S Critchlow (Cave, et.al)
144 South 1650 East
Price, Utah 84501 (contiguous & within)

Andalex Resources Inc.
P.O. Box 902
Price, Utah 84501 (within)

Zion Security Corporation
10 East South Temple
Salt Lake City, Utah 84111 (within)

State of Utah
School Trust Lands Administration
355 West North Temple
3 Triad Center, Suite 400
Salt Lake City, Utah 84180 (contiguous & within)

R645-301-521.132. RIGHT TO ENTER AND CONDUCT MINING ACTIVITIES

See R645-301-114.230.

R645-301-521.133.1 OPERATIONS WITHIN 100 FEET OF ROAD RIGHT-OF-WAY

County Road 299 starts at highway 6 in Price and terminates at Andalex Resources' minesite (Plate 1).

R645-301-521.133.2 RELOCATING A PUBLIC ROAD

N/A

R645-301-521.140. MINE AND PERMIT AREA MAPS

Cross Sections, Maps, and Plans

Most of the cross sections, maps, and plans previously submitted as part of the approved Mining and Reclamation Plan, are applicable. Where necessary, the original maps have been revised to indicate the lease in Hoffman Creek and the revisions are included in this submittal in Volume II.

All categories within this section have been addressed. Specifically,

a) Plates 26, 27, and 28 and 40 show all the test borings locations and elevations. Specific information relating to these drill holes and the strata encountered can be found in Appendix E (coal quality, description of other strata).

b) Monitoring stations for water quality are shown on Figure IV-11. Including the new 12-11 in Alrad Canyon. Fish and wildlife monitoring stations were not set up for this application. However, refer to Plate 34 which depicts wildlife distribution. Air quality monitoring was not required for this application. Figure 6 in Appendix L shows proposed monitoring stations. Andalex has adhered to the locations shown on Figure IV-11 which is included in Andalex's operating plan.

c) Refer to Appendix E for specific drill hole lithologies as well as data on quality and chemical characteristics.

d) Crop lines and strikes and dips can be found on the coal thickness isopachs in Volume II, Plates 26, 27, and 28.

e) All old workings in the three coal seams to be mined are shown on Plates 29, 30, and 31. There are no old workings in the Centennial Seam.

f) All subsurface water on the permit area exists in perched aquifers. The Aberdeen sandstone is the lowest water bearing unit within the permit area and is discussed in Geology. The

only water well drilled on the property which has been used with any frequency (well #1) has not depicted any seasonal variation. It is always a low producer.

g) There are no surface waters within the permit area. All drainages (natural) are shown on the topography on Plate 21. All constructed drainages are shown on Plates 6 and 7. There are no irrigation ditches. Appendix L, which is the Hydrologic Inventory, contains Figure 4 which clearly depicts the location of springs in the permit area and adjacent areas. This figure, along with Figures 5 and 6, depict the areal extent of the inventory.

h) N/A

i) Plate 6 shows the location of development waste stored in an area which was previously used as a sediment pond. Plate 6 now also shows the location of a new area above the Apex Mine which can be used for temporary and permanent storage of development waste such as sediment pond material. All dams and impoundments are shown on Plates 6 and 7, and detailed on Plates 11, 12, and 13. There are no other water treatment or air pollution control facilities on the permit area.

j) There are no oil or gas wells within the permit area. Three water wells are shown on Plate 6. Well number 1 is 220 feet deep; number 2 is 100 feet deep, and number 3 is 120 feet deep.

k) Plates 14 and 15 accurately depict the area currently affected by mining as well as the area to be affected. They show the slopes as they exist as well as after construction and upon final reclamation.

<u>Operation Plan: Maps and Plans</u>

1) Most of the maps and plans previously submitted as part of the approved Mining and Reclamation Plan, are applicable. Where necessary, the original maps have been revised to indicate the lease in Hoffman Creek and the revisions are included in this submittal in Volume II.

All necessary maps and plans to complete this section are found in Volume II of the submittal and also in the appendices of Volume I specifically,

a) Underground coal mining activities to be conducted and lands to be affected by surface facilities are shown on Plates 6, 29, 30, 31 and 41.

b-1) Buildings, utilities, and facilities are depicted on Plates 6 and Plate LF-1.

2) The area to be affected is shown on several plates, including

4, 5, 6, 29, 30, 31 and 41. These last four plates show the sequence of mining in the four seams over the five year term of the permit. Plate 30 has been revised to show immediate development in the Gilson Seam as soon as approval is achieved. Reclamation will not take place until after all four seams are mined out. This activity is depicted on Plates 15, 16, 17, and 20.

3) Plates 5 depict the entire disturbed area for which a performance bond is posted. The acreage is shown on Plate 5.

4) Coal storage and loading areas are shown on Plates 6. No cleaning takes place.

5) Plates 6 show a non-coal waste storage area as well as topsoil storage areas. Plates 36 and 37 show the topsoil piles in detail.

6) All water diversions and other water facilities are shown on Plates 6, 8, 9, 11, 12, and 13. Also, typical diversions for disturbed area and undisturbed areas are shown in the Sedimentation and Drainage Control Plan.

Diversion ditches as they exist are shown on Revised Plate 6. Topographic detail has been added to Plate 8 to allow determination of watershed slopes within the disturbed area.

Diversions and other hydrologic controls are shown on Plates 6, 7, 8, 11, 12 and 13, for the Aberdeen Mine. Topographic detail has been added to Plate 8 to allow determination of watershed slopes within the disturbed area.

Plate 16 has been revised to show drainage during the reclamation period before and after removal of sediment ponds (Phase I).

Plate 17 shows final drainage details.

Plate 9 shows delineations of watershed areas.

The main culvert will be removed entirely during the reclamation-earthwork phase except under Pond "E". Pond "E" will be enlarged, and the entire drainage area above will flow into the restored channel RC-1 and through Pond "E-PM". Once rEVEGATATION and water quality standards have been met, Pond "E-PM" and the culvert will be removed and reclaimed.

7) There is no coal processing waste at the Centennial facility There are no pollution control facilities other than sedimentation ponds on the permit area. Please note that waste rock generated by the Centennial Seam rock tunnels was disposed of underground in the existing Pinnacle Mine workings.

8) Specific facilities are not used to protect or enhance

wildlife with the exception of the powerline which was built according to strict guidelines issued by the Division of Wildlife Resources and the U.S. Fish and Wildlife Service regarding raptor protection. The powerline design is included in Volume I as Appendix I (powerline design). Also, speed limits are posted within the permit area.

9) The two powder magazines are shown on Plates 6.

10) Plates 6, 8, and 9 show these facilities associated with protection of the hydrologic balance including sedimentation ponds and storage of non-coal waste. There are no permanent impoundments, or coal processing wastes. Underground development waste has been generated while putting in the Aberdeen portals, and has been used as stock pile pad material at the Aberdeen Minesite. The volume of this material is minimal.

11) Plates 16 and 17 show the final reclamation contours and configuration of the surface for Phases I and II respectively.

12) Subsidence monitoring points are shown on Plate 25. An additional station was added to Plate 25 to cover pillar extraction on the new Hoffman Creek Lease. Also a new station has been added over the Graves Lease. Water monitoring locations are shown on Figure IV-11. A new water monitoring station will be added over the Graves Lease, however and a new station has been added at the mouth of Alrad Canyon (12-1) for the AEP lease.

13) There will be no facilities left on the permit area permanently excepting possibly the road through the site. After the completion of underground mining, all facilities will be removed with the exception of one downstream sedimentation pond. This pond will be removed upon final reclamation.

c) Maps, plans, and cross sections required under b)(5),(6),(10), and (11) have been prepared under the direction of, and certified by a registered professional engineer. Assistance has come from a registered land surveyor.

1) Detailed maps, plans, and cross sections for our sediment ponds, Plates 11, 12, and 13 have been certified by a registered professional engineer.

2) Andalex has not used any excess spoil or underground development waste maps or cross sections. A map (uncertified) depicting the location of non-coal waste storage is included as Plate 6.

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N/A

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N/A

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See R645-301-510, Volume II.

R645-301-521.180. OTHER INFORMATION

See R645-301-510, Volume II.

R645-301-521.200. SIGNS AND MARKERS SPECIFICATIONS

Signs of a uniform design, showing the company name, business address, and telephone number as well as the identification number of the current regulatory program permit authorizing the underground mining activities, have been placed at all access points to the permit area. These signs have been placed to be easily seen, are made of a durable material, and conform to local laws and regulations. The topsoil storage area is clearly marked.

As this is an underground mine, there will be no blasting conducted on the surface with the exception of highwall construction. When blasting for highwall construction does occur, conspicuous signs and flagging will be posted as required by 30 CFR Parts 817.11 (f) and 817.65 (e).

As there are no perennial streams or a stream with a biological community on the permit area, buffer zone markers will not be necessary. The perimeters of all areas affected by surface operations and facilities are clearly marked. These signs and markers shall be maintained during all activities and retained and

APPENDIX X

GOB GAS VENT HOLES (GVH)

APPENDIX X

CHAPTER 1

ANDALEX RESOURCES, INC.

APPENDIX X

CENTENNIAL PROJECT
GOB GAS VENT HOLES

C/007/019

(Revised)
January, 2010

CHAPTER 1
LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

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111 Introduction

This project is a "Ventilation Assistance Program", wherein hazardous "gob gas" from the longwall will be partially vented to the surface. The quantity and quality of the vented gas will be the same as that presently being discharged at the mine fan. The discharged "gob gas" will be of no commercial value.

The holes are located on surface property owned by Dave R. and Mildred Cave, et al., Mathis Land, Inc., and the estate of Funnon Shimmin. The mineral rights are owned by Mathis Land, Inc. and the United States Government (B.L.M.) And are under lease by Andalex Resources, Inc. Memorandum of surface owner agreements are included in Appendix 4-2 of Appendix X.

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

On May 11, 2007, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

It is possible not all of the holes will be needed; however, all sites have been permitted in case they are needed. ~~The existing reclamation bond is posted in the amount of $1,296,000.00. It has been determined that the total bonding amount for each additional GVH will be $28,000 per hole.~~ Additional bonding of $224,000 has been secured for the 8 primary sites (GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17). ~~Bonding will be in place for each site prior to any surface disturbing activities~~. GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, and GVH#16A presently do not have bonding in place. These holes are conditionally approved and will not be constructed until additional bonding has been posted. These holes are alternates to be constructed in the unlikely event that one of the primary holes fails for some reason or if additional holes are needed for safety of the miners.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso operating agreement is included as Attachment 1-1. The Oso agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since the signing of the operating agreement, Oso has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and 5). Oso is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out and/or sealed up, the term of the Oso agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. All other GVH installations are maintained as a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

The existing and proposed hole locations are described in Table 1-1 and are shown on Plate 1-1.

Because the overall status of the GVH sites changes frequently as a result of mine plan changes, the company commits to update the Division annually as to the current status of all GVH sites. This will be done as part of the annual report.

TABLE 1-1
Gob Gas Well Locations (see Figure 1-1)

Hole Number	Status	Section	Township and Range
GVH-1	Site reclaimed 10/2009	31 (32*)	T.12S., R.11E.
GVH-3	Hole Completed	31	T.12S., R.11E.
GVH-4	Hole Completed	1	T.13S., R.10E.
GVH-5	Site reclaimed 10/2009	31 (32*)	T.12S., R.11E.
GVH-6	Hole Completed	31	T.12S., R.11E.
GVH-5A	Hole Completed	31	T.12S., R.11E.
GVH-7, 7A*	Hole Completed	31	T.12S., R.11E.
GVH-8	Hole Completed	36	T.12S., R.10E.
GVH-9	Hole Completed	36	T.12S., R.10E.
GVH-5B	Eliminated	31	T.12S., R.11E.
GVH-8A	Hole Completed	36	T.12S., R.10E.
GVH-10	Eliminated	31	T.12S., R.11E.
GVH-10A	Eliminated	31	T.12S., R.11E.
GVH-11	Hole Completed	31	T.12S., R.11E.
GVH-11A	Proposed	31	T.12S., R.11E.
GVH-12	Hole Completed	31	T.12S., R.11E.
GVH-12A	Proposed	31	T.12S., R.11E.
GVH-13	Hole Completed	31	T.12S., R.11E.
GVH-13A	Proposed	31	T.12S., R.11E.
GVH-14	Hole completed	31	T.12S., R.11E.
GVH-14A	Proposed	36	T.12S., R.10E.
GVH-15	Pad only, no hole	36	T.12S., R.10E.
GVH-15A	Proposed	36	T.12S., R.10E.
GVH-16	Pad only, no hole	36	T.12S., R.10E.
GVH-16A	Proposed	36	T.12S., R.10E.
GVH-17	Pad only, no hole	36	T.12S., R.10E.

* Redrilled on existing pad GVH#7.
* Recent BLM cadastral survey has moved the boundary between Sections 31 and 32

	MINE COORDINATE SYSTEM (SURVEY FEET)			UTM NAD 27 (SURVEY FEET)		WGS 1984	
STATION	NORTHING	EASTING	ELEVATION	NORTHING	EASTING	LATITUDE	LONGITUDE
GVH 1	510178.9	2218871.9	8527.4	14428218	1717912	39ø43'51.5"N	110ø43'30.4"W
GVH 3	510246.2	2214978.2	8510.1	14428308	1714021	39ø43'52.5"N	110ø44'20.2"W
GVH 4	510196.9	2212651.7	8589.2	14428273	1711697	39ø43'52.2"N	110ø44'50.0"W
GVH 5	511682.1	2218840.4	8463.1	14429720	1717889	39ø44'06.3"N	110ø43'30.6"W
GVH 5A	511717.6	2218039.0	8476.1	14429760	1717089	39ø44'06.8"N	110ø43'40.9"W
GVH 6	511735.7	2216541.0	8477.8	14429787	1715592	39ø44'07.1"N	110ø44'00.1"W
GVH 7	511708.0	2214865.8	8385.9	14429770	1713918	39ø44'07.0"N	110ø44'21.5"W
GVH 7A	511708.0	2214865.8	8385.9	14429770	1713918	39ø44'07.0"N	110ø44'21.5"W
GVH 8	511695.0	2213369.8	8453.1	14429766	1712423	39ø44'07.0"N	110ø44'40.6"W
GVH 8A	511680.0	2212688.7	8400.0	14429755	1711742	39ø44'06.9"N	110ø44'49.4"W
GVH 9	511665.0	2212007.5	8511.0	14429744	1711062	39ø44'06.8"N	110ø44'58.1"W
GVH 10	513232.5	2218979.4	8282.0	14431268	1718037	39ø44'21.6"N	110ø43'28.7"W
GVH 10A	513227.1	2218446.1		14431266	1717504		
GVH 11	513221.6	2217912.8	8358.1	14431264	1716971	39ø44'21.6"N	110ø43'42.3"W
GVH 11A	513213.5	2217382.1		14431259	1716441		
GVH 12	513205.3	2216851.3	8339.7	14431254	1715911	39ø44'21.6"N	110ø43'55.9"W
GVH 12A	513197.5	2216317.0		14431249	1715377		
GVH 13	513189.8	2215782.6	8182.6	14431245	1714843	39ø44'21.5"N	110ø44'09.6"W
GVH 13A	513187.5	2215252.1		14431245	1714313		
GVH 14	513185.1	2214721.5	8293.7	14431246	1713783	39ø44'21.6"N	110ø44'23.2"W
GVH 14A	513180.3	2214189.2		14431245	1713251		
GVH 15	513175.5	2213657.0	8337.7	14431243	1712719	39ø44'21.6"N	110ø44'36.8"W
GVH 15A	513171.1	2213124.4		14431242	1712187		
GVH 16	513166.7	2212591.9	8429.4	14431241	1711655	39ø44'21.6"N	110ø44'50.4"W
GVH 16A	513161.9	2212059.4		14431239	1711123		
GVH 17	513157.2	2211527.0	8426.7	14431238	1710591	39ø44'21.6"N	110ø45'04.1"W

112 Identification of Interests

Refer to the same section of the approved M&RP.

112.100 Business Entity

Refer to the same section of the approved M&RP.

112.200 Applicant and Operator

Applicant and Operator:

Andalex Resources, Inc
Tower Division
P.O. Box 910
East Carbon, Utah 84520
Telephone: (435) 888-4000

Contact Person and Resident Agent:

Dave Shaver
Andalex Resources, Inc
Tower Division
P.O. Box 910
East Carbon, Utah 84520
Telephone: (435) 888-4000

Responsibility: Andalex Resources, Inc. is responsible for submission of information and will pay abandoned mine reclamation fees.

112.300 Officers of the Applicant

Refer to the same section of the approved M&RP.

112.400 Coal Mining and Reclamation Operation Owned or Controlled

Refer to the same section of the approved M&RP.

112.500 Legal or Equitable Owner of the Surface and Mineral Properties

The legal and equitable owner of the surface and mineral properties to be affected by this operation during the duration of the permit period are listed below:

Surface Owners

David R. & Mildred Cave, et al.
144 South 1650 East
Price, Utah 84501

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501

F. and D. Shimmin
711 North 500 East
Price, Utah 84501

Sub-Surface Owners

United States of America
Bureau of Land Management
Utah State Office
136 East South Temple
Salt Lake City, Utah 84111

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501

Oso Energy Resources Corp.
900 Main Avenue, Suite D
Durango, Colorado 81301 (gas rights)

112.600 Owners of Record of Property Contiguous to Proposed Permit Area

Owners of record for surface and mineral properties contiguous to the proposed permit area are listed below:

Contiguous Surface Owners

David R. & Mildred Cave, et al.
144 South 1650 East
Price, Utah 84501

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501

F. and D. Shimmin
711 North 500 East
Price, Utah 84501

Contiguous Sub-Surface Owners

United States of America
Bureau of Land Management
Utah State Office
136 East South Temple
Salt Lake City, Utah 84111

State of Utah
School Trust Lands Administration
675 East 500 South
Salt Lake City, Utah 84102

Mathis Land Co.
Sunnyside Star Route
Price, Utah 84501

Oso Energy Resources Corp.
900 Main Avenue, Suite D
Durango, Colorado 81301 (gas rights)

112.700 MSHA Numbers

Refer to the same section of the approved M&RP.

112.800 Interest in Contiguous Lands

Andalex Resources, Inc. has no interest in contiguous lands other than those currently owned as shown on Plate 1A of the approved M&RP.

112.900 Certification of Submittal Information

No information has changed in the approved M&RP because of this submittal. Refer to the same section of the approved M&RP.

113 Violation Information

Refer to the same section in the approved M&RP.

114 Right-of-Entry Information

Refer to the same section of the approved M&RP. A surface use agreement with the

private surface owners is in place. A memorandum of this agreement is included in the MRP and is on record at the County Recorder's office. (See Appendix X-1)

Since each proposed well site has not been finally located or surveyed in the field, an assumed disturbance of 1.0 acres is used as an estimate for each site.

See Table 1-2 for actual disturbed acreage for each completed well site. The actual disturbed acres will be added to the total disturbed acreage for the Centennial Project as each site is constructed and surveyed.

TABLE 1-2
Disturbed Acres by Well Site

Well Site	Status	Disturbed Acres	
		Original	Existing**
GVH-1	Hole Completed	1.15	0.52 (reclaimed)
GVH-3	Hole Completed	1.11	0.55
GVH-4	Hole Completed	0.95	0.45
GVH-5	Hole Completed	0.97	0.51 (reclaimed)
GVH-6	Hole Completed	1.49	0.46
GVH-5A	Hole Completed	0.76	0.59
*GVH-7, 7A	Hole Completed	0.50	0.33
GVH-8	Hole Completed	0.65	0.65
GVH-9	Hole Completed	0.81	0.81
GVH-5B	Eliminated	-	-
GVH-8A	Hole Completed	1.25	0.49
GVH-10	Eliminated	-	-
GVH-10A	Eliminated	-	-
GVH-11	Hole completed	-	-
GVH-11A	Proposed	-	-
GVH-12	Hole Completed	-	-
GVH-12A	Proposed	-	-
GVH-13	Hole Completed	-	-
GVH-13A	Proposed	-	-
GVH-14	Hole Completed	-	-
GVH-14A	Proposed	-	-
GVH-15	Pad only, no hole	-	-
GVH-15A	Proposed	-	-
GVH-16	Pad only, no hole	-	-
GVH-16A	Proposed	-	-
GVH-17	Pad only, no hole	-	-

* Redrilled on existing pad GVH#7.

** Existing acres reflect contemporaneous reclamation work completed to date.

115 Status of Unsuitability Claims

Refer to the same section of the approved M&RP.

116 Permit Term

Refer to the same section of the approved M&RP.

117 Insurance, Proof of Publication, and Facilities and Structures Used in Common

The certificate of insurance(s) for each well will be obtained if required when the well is drilled. The certificate of insurance(s) will be included in Appendix B of the approved M&RP.

118 Filing Fees

Refer to the same section of the approved M&RP.

120 PERMIT APPLICATION FORMAT AND CONTENTS

This amendment submittal will comply with R645-301-120.

130 REPORTING OF TECHNICAL DATA

All technical data submitted in the amendment will be accompanied by the name or organization responsible for the collection and analysis of data, dates of collection and descriptions of methodology used. Technical analyses will be planned by or under the direction of a qualified professional in the subject to be analyzed.

140 MAPS AND PLANS

The maps and plans in the Mining and Reclamation Plan will correspond with the requirements in R645-301-140.

150 COMPLETENESS

Andalex Resources, Inc. believes the information in this permit application to be complete and correct.

APPENDIX X

CHAPTER 2

(Revised)
January, 2010

CHAPTER 2
SOILS

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210 INTRODUCTION

This chapter and associated attachments address the pertinent data required for the GVH installations for the Centennial Project. Only those sections of the Division regulations that apply to the well sites have been addressed. The remainder of the regulations have already been addressed in the existing M&RP. The M&RP and this document contain pertinent information relating to the identification, management, and reclamation activities associated with the soil resources.

HISTORICAL BACKGROUND:

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

On May 11, 2007, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso operating agreement is included as Attachment 1-1. The Oso agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since

the signing of the operating agreement, Oso has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and 5). Oso is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out and/or sealed up, the term of the Oso agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. All other GVH installations are considered a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

220 ENVIRONMENTAL DESCRIPTION

The well sites range in elevation from approximately 8400 to 8600 feet. The well sites are located in the Summit Creek/Emma Park area of the Book Cliffs. General vegetation includes sagebrush-grass, aspen and oak brush communities.

221 Prime Farmland Investigation

Due to limiting terrain, lack of water for irrigation and no evidence of past cultivation of the sites, it is concluded that no prime farmland exists within the area of the well site disturbance.

222 Soil Survey

221.100 Soils Map

An order 1 soil survey has been conducted of the area to help define the previous conditions at well sites 1, 3, 4, 5 and 6. This information will be used for final reclamation for these sites. An order 1 Soil Survey was also conducted for completed sites GVH#5A, GVH#7, GVH#8 and GVH#9. Results of the order 1 surveys are provided in Attachment 2-1 "Soil Inventory and Assessment" - Approved Holes GVH#1 through GVH#9. Due to the amount of soil data gathered during the order 1 surveys done for the existing nine nearby sites and the consistent nature of the soil characteristics in the area, assumptions were made about the nature of the soils at sites GVH#7A and GVH#8A. These assumptions

included depth of available topsoil and quality of material.
An order 1 soil survey has also been completed for proposed primary holes GVH#10 through GVH#17. Results of this survey are included in Attachment 2-1 "Soil Inventory and Assessment - Proposed Holes GVH#10 through GVH#17". It should be noted that the soils survey was conducted on the primary holes numbers only (i.e. GVH#10, GVH#11, etc.). Each of the primary holes has an alternate or additional location proposed (i.e. GVH#10A, GVH#11A, etc.). Based on the amount of soil data gathered for the previously approved holes, as well as that for the proposed holes, and the consistent nature of the soil characteristics in the area, assumptions have been made about the nature of the soils at the alternate proposed sites. These assumptions include depth of available topsoil and quality of material. Topsoil at these alternate sites will be sampled and analyzed at the time of salvage. Results of these analyses will then be added to Attachment 2-2.

222.200 Soil Identification

See Attachment 2-1, and 2-2.

222.300 Soil Description

See Attachment 2-1, and 2-2.

222.400 Soil Productivity

See Attachment 2-1, and 2-2.

TABLE 2-1
Topsoil Volumes

Well No.	Status	Cubic Yards of Material	
		Original	Remaining*
GVH-1	Hole Completed	2778	1250 (now reclaimed)**
GVH-3	Hole Completed	2689	1333
GVH-4	Hole Completed	2300	1083
GVH-5	Hole Completed	2347	1228 (now reclaimed)**
GVH-6	Hole Completed	3611	1111
GVH-5A	Hole Completed	1839	1389
GVH-7, 7A	Hole Completed	1210	926
GVH-8	Hole Completed	1573	1573
GVH-9	Hole Completed	1960	1960
GVH-5B	Eliminated	-	-
GVH-8A	Hole Completed	3025	1186
GVH-10	Eliminated	2480	-
GVH-10A	Eliminated	2400	-
GVH-11	Hole Completed	2480	-
GVH-11A	Proposed	2400	-
GVH-12	Hole Completed	807	-
GVH-12A	Proposed	2400	-
GVH-13	Hole Completed	2044	-
GVH-13A	Proposed	2400	-
GVH-14	Hole Completed	2823	-
GVH-14A	Proposed	2400	-
GVH-15	Pad only, no hole	1775	-
GVH-15A	Proposed	2400	-
GVH-16	Pad only, no hole	2346	-
GVH-16A	Proposed	2400	-
GVH-17	Pad only, no hole	2420	-

* Remaining soil is after original pad reduction and contemporaneous reclamation.

** Sites were reclaimed October, 2009, no topsoil volumes presently remain.

Note: 2400 CY per Well is assumed until final surveys are done. Actual size of the pads could be less than 1 acre, in which case the volume stored will be reduced accordingly.

223 Soil Characterization

See attachment 2-1, and 2-2.

224 Substitute Topsoil

Andalex Resources, Inc. does not plan to use substitute topsoil as growth media unless described in Section 222.400.

230 OPERATION PLAN

231 General Requirements

231.100 Removing and Storing Topsoil Methods

The topsoil will be removed (and replaced) to a depth of 18 inches where the thickness exists, stockpiled and protected with a berm and/or silt fence. A qualified person will be on site during soil salvage to monitor and supervise the operation for the purpose of maximizing salvage volumes. Prior to topsoil salvage shrubs/vegetation will be removed and placed/wind rowed along the inside perimeter of the disturbed area. Stockpiled topsoil will not be allowed to remain at the angle of repose (1h:1v) for a period of longer than two weeks. During contemporaneous reclamation, or after two weeks, the stockpiled topsoil slopes will be reduced to less than 2h:1v. The topsoil will then be immediately seeded after the proper angle is achieved. Reseeding will use the approved seed mixture found in ARI's Mining and Reclamation Plan (page 3-21), or a mix recommended by the Division, and will be hand broadcast, raked in slightly and mulched with straw or alfalfa hay. Hand broadcasting requires twice the seed rate per acre as drilling.

After the topsoil is removed, the mud pit will be excavated and the soils from the mud pit excavation will be stored immediately adjacent to the mud pit. Mud pit excavation of subsoil will be approximately 110 CY at each well site. Generally, it is expected that mud pits will be excavated in an area roughly 200 square feet by 15 feet deep. A larger area is possible, should the depth not be achievable, or multiple pits may be employed . However a mud pit volume of roughly 3000 cubic feet per drill site is needed. A portable container for drilling fluids will be used if necessary, should there not be sufficient subsoil depth to excavate a mud pit (where bed rock is encountered).

Topsoil beneath the topsoil stockpiles will not be removed. Ribbon or a marking fabric will be placed on top of the topsoil prior to placement of the topsoil from the well pad area.

The volume of subsoil to be salvaged and used to create berms around the perimeter of the well including the topsoil stockpile perimeter is approximately 30 cubic yards.

231.200 Suitability of Topsoil Substitutes/Supplements

See Section 224.

231.300 Testing of Topsoil Handling and Reclamation Procedures Regarding Revegetation

Andalex Resources, Inc. will exercise care to guard against erosion during and after application of topsoil and will employ the necessary measures to ensure the stability on graded slopes. Erosion control measures will include silt fences, berms, seeding, straw bales, soil roughening, and mulching of the soils.

Topsoil will be redistributed and the original soil surface beneath the topsoil stockpile will be roughened as presented in Section 242.100 and seeded with the seed mix described in Chapter 3, Section 356.

231.400 Construction, Modification, Use, and Maintenance of Topsoil Storage Pile

Topsoil removed from the drill pad sites will be stockpiled on the site. The estimated volumes of topsoil stockpile for each site are shown in Table 2-1. The stockpiles will be sized as shown in Table 2-2.

The slopes of the stockpile will be 1H:1V or approximately 45° during the construction phase. Soils in these areas generally have an angle of repose greater than 50 degrees, making a stockpile with 1:1 slopes feasible. The steeper slope also help minimize the area to be disturbed. During the operational phase the remaining topsoil will be stockpiled with slopes of 2H:1V.

TABLE 2-2
Topsoil Stockpile Dimensions

Well No.	Status	Length (ft)	Width (ft)	Height (ft)
GVH-1	Reclaimed**	75 (formerly)	40 (formerly)	11 (foremerly)
GVH-3	Existing	100	40	9
GVH-4	Existing	95	35	9
GVH-5	Reclaimed**	100 (formerly)	35 (formerly)	9.5 (formerly)
GVH-6	Existing	105	35	8.5
GVH-5A	Existing	100	25	15
GVH-7, 7A	Existing	100	25	10
GVH-8	Existing	140	25	12
GVH-9	Existing	100	25	17.5
GVH-5B	Eliminated	-	-	-
GVH-8A	Existing	100	40	16
GVH-10	Eliminated	100	40	16
GVH-10A	Eliminated	100	40	16
GVH-11	Existing	100	40	16
GVH-11A	*Proposed	100	40	16
GVH-12	Existing	100	40	16
GVH-12A	*Proposed	100	40	16
GVH-13	Existing	100	40	16
GVH-13A	*Proposed	100	40	16
GVH-14	Existing	100	40	16
GVH-14A	*Proposed	100	40	16
GVH-15	Existing	100	40	16
GVH-15A	*Proposed	100	40	16
GVH-16	Existing	100	40	16
GVH-16A	*Proposed	100	40	16
GVH-17	Existing	100	40	16

* These are approximate dimensions of the topsoil stockpile for the proposed well sites, based on the estimated CY from Table 2-1. Actual construction dimensions may vary.

** These sites were reclaimed October , 2009, no remaining topsoil piles.

See section 234.200 for detailed information on the topsoil stockpile(s).

232 Topsoil and Subsoil Removal

232.100 Topsoil Removal and Segregation

All topsoil will be removed as a single layer with no segregation to a depth of 18 inches, where available. Topsoil will be removed using a dozer and/or loader. Refer to Section 231.100 for additional details.

232.200 Poor Topsoil

Not Anticipated

232.300 Thin Topsoil

Not Anticipated

232.400 Minor Disturbances Not Requiring Topsoil Removal

Not Anticipated

232.500 Subsoil Segregation

The B and C soil horizons will generally not be removed. However, in drill pad locations where the A horizon is 18 inches or less, up to six inches of sub-soil may be removed for the purpose of constructing a berm around the perimeter of the drill pad. Construction of this berm, which will be roughly triangular in shape and roughly one foot in height (1V:1H), will accumulate an additional storage of either lower A or possibly B horizon soil of approximately 800 cubic feet or 30 cubic yards of material, per site.

232.600 Timing

Topsoil removal will take place after all vegetation that could interfere with salvaging the topsoil has been grubbed.

232.700 Topsoil and Subsoil Removal Under Adverse Conditions

The topsoil will be removed first and stockpiled and the remaining soil horizons will be left in place, except where natural conditions render removal operations hazardous or detrimental to soils outside the disturbed area then topsoil will not be removed.

Conventional Machines - In locations where steep grades, adverse terrains, sever rockiness, limited depth of soils, or other adverse conditions exist that render soil removal activities using conventional machines hazardous, soils will not be salvaged and stockpiled. Such conditions are not likely to occur in these areas.

Substitute Topsoil - Importing of substitute topsoil is not anticipated (Section 224).

233 Topsoil Substitutes and Supplements

233.100 Overburden Materials Supplementing and/or Replacing Topsoil

No overburden material will be used.

233.200 Suitability of Topsoil Substitutes and Supplements

No substitute topsoil is planned.

233.300 Physical and Chemical Analyses

See Section 243

233.400 Testing of Substitute Topsoil

No substitute topsoil is planned.

234 Topsoil Storage

234.100 Topsoil Stockpiling

Topsoil will be stockpiled for later use in reclamation operations.

234.200 Topsoil Stockpile

Stable Stockpile Site - Stockpiled material will be placed on a stable site.

Protection from Contaminants and Compaction - To protect the topsoil from contaminants and unnecessary compaction that could interfere with vegetation, the stockpile will be isolated from the main surface area by a berm and/or silt fence. A sign designating "topsoil" will be installed on the stockpile.

The topsoil stockpile will be constructed in such a manner as to allow access for repair of the pile surfaces and diversion structures.

Wind and Water Erosion Protection - The topsoil stockpile will be protected from water erosion by berms, which trap sediment runoff from the stockpile. The berms have been designed to completely contain the 10-year 24-hour storm event (see Attachment 7-1). The stockpile will be surface pitted, gouged and/or roughened and revegetated using the seeds listed in Table 3-2 to prevent wind erosion.

Topsoil Redistribution - Stockpile soil will not be moved until redistribution during contemporaneous or final reclamation operations unless approved by the Division.

234.300 Topsoil Stockpile Relocation

Stockpiles soil in jeopardy of being detrimentally affected in terms of its quality by drilling operations may be temporarily redistributed or relocated on approval by the Division and modification of this M&RP.

240 RECLAMATION PLAN

241 General Information

Reclamation of the sites (topsoil redistribution, amendments, and stabilization) is discussed in Sections 242, 243 and 244 respectively.

242 Soil Redistribution

242.100 Soil Redistribution Practices

The topsoil will be placed after recontouring of the site has occurred. Topsoil will be handled when loose or in a friable condition. The moisture content will be visually monitored and water will be added as needed to enhance the soil's condition for handling. The approximate amount of topsoil available for each site is shown in Table 2-1.

The topsoil will be distributed in two phases at each well site. The first phase will be the contemporaneous reclamation of a portion of the pad area used during well construction (see Figures 5-2). During contemporaneous reclamation topsoil from the stockpile will be distributed on each site in the depths shown in Table 2-3.

Final reclamation will occur at all well sites after venting of the gob gas is complete, venting equipment has been removed and the well has been plugged. The topsoil stockpile storage area and any access road required to be removed will be reclaimed during this final phase. If access roads were pre-existing, they will not be reclaimed. Refer to Section 341 for additional information.

Soil Thickness - The topsoil will be distributed during contemporaneous and final reclamation in the thickness shown in Table 2-3. (Note: A topsoil thickness of 18" is assumed for all sites until actual measurements can be taken.)

TABLE 2-3
Approximate Topsoil Distribution Thickness

Well Site No.	Status	Topsoil Thickness (inches)
GVH-1	Reclaimed	18
GVH-2	Actual	18
GVH-3	Actual	18
GVH-5	Reclaimed	18
GVH-5A	Actual	18
GVH-6	Actual	18
GVH-7, 7A	Actual	18
GVH-8	Actual	18
GVH-9	Actual	18
GVH-5B	Eliminated	-
GVH-8A	Actual	18
GVH-10	Eliminated	18
GVH-10A	Eliminated	18
GVH-11	Actual	18
GVH-11A	Proposed	18
GVH-12	Actual	6
GVH-12A	Proposed	18
GVH-13	Actual	22
GVH-13A	Proposed	18
GVH-14	Actual	21
GVH-14A	Proposed	18
GVH-15	Actual	12
GVH-15A	Proposed	18
GVH-16	Actual	18
GVH-16A	Proposed	18
GVH-17	Actual	18

Compaction - Prior to the application of topsoil, compacted subsoils will be roughened or loosened for a depth of 18 to 24 inches. To prevent compaction of topsoil, soil moving equipment will refrain from unnecessary operation over spread topsoil. The topsoil will be in a loosened condition prior to seeding.

Following the drying of the mud pit materials, the dirt excavated to create the mud pit will be mixed with the drill cutting and returned to the pit to prevent a boundary of hard material from forming in the mud pit are that would hamper root penetration and then compacted to minimize settling.

Erosion - Care will be exercised to ensure the stability of topsoil on graded slopes to guard against erosion during and after topsoil application. Post reclamation (contemporaneous and final) erosion control measures will be surface roughing, mulching and seeding. Outslopes along all the access roads will be seeded with a fast growing type of seed, western wheatgrass grass for example. This will quickly establish an erosion control measure on the outslopes.

242.200 Regrading

The areas will be graded to their approximated original topographic configuration.

242.300 Topsoil Redistribution on Impoundments and Roads

The mud pits will be dismantled and filled following completion of drilling. See Section 242.100, Compaction for additional information. Mud pits will be covered with the same amount of topsoil as the rest of the site. The roads existing prior to starting the drilling program will not be reclaimed. Access roads built to allow entrance to the drilling pads will be reclaimed and will receive topsoil in the same depth as their corresponding pad areas when gob gas venting is complete.

243 Soil Nutrients and Amendments

The soils will be analyzed directly following salvage to determine if amendments are needed. Testing of the topsoil will be done according to Table 6 of the Division's Topsoil and Overburden Guidelines. The topsoil will be tested at a minimum for the following parameters: Texture, pH, electrical conductivity, total carbon, SAR, water holding capacity, plant available nitrogen, and phosphorus. Results of these analyses will be incorporated into Attachment 2-2.

244 Soil Stabilization

244.100 Protection and Stabilization of Surface Area

All reclaimed areas will be stabilized to control erosion by application of mulch, tackifier, and roughening of the surface. The areas will be graded to the approximately original topographic configuration. Seeding will be accomplished with the application of seeds and mulch with a long fiber tackifier or broadcast. Methods of protection and stabilization are further discussed in Chapter 3, Section 341.

244.200 Mulch Application

Mulch/tackifier will be applied to stabilize the soil on all areas that have been regraded and covered with growth media. For further discussion of revegetation practices to be utilized, see Chapter 3, Section 341.

244.300 Rills and Gullies

Postmining Land Use and Revegetation - Rills and gullies that are approximately nine (9) inches in depth and disrupt the postmining land use or reestablishment of vegetative cover will be regraded and seeded.

Water Quality - There are no streams immediately adjacent to the well sites.

250 PERFORMANCE STANDARDS

251 Topsoil, Subsoil, and Topsoil Supplements Management

All topsoil, subsoil, and topsoil supplements will be managed as outlined in Sections 230 and 240.

252 Stockpiled Topsoil and Subsoil

All stockpiled topsoil and subsoil will be managed according to plans outlined in Sections 230 and 240.

ATTACHMENT 2-1
SOIL INVENTORY AND ASSESSMENT

APPROVED HOLES GVH-1 through GVH-9

ATTACHMENT 2-2
SOIL INVENTORY AND ASSESSMENT

PROPOSED HOLES GVH-10 through GVH-17

APPENDIX X

CHAPTER 3

(Revised)
January,2010

CHAPTER 3
BIOLOGY

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310 INTRODUCTION

This chapter presents a description of the biological resources found on the GVH installations for the Centennial Project.

HISTORICAL BACKGROUND:

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

On May 11, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso operating agreement is included as Attachment 1-1. The Oso agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since the signing of the operating agreement, Oso has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and 5). Oso is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out and/or sealed up, the term of the Oso agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the

stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. All other GVH installations are considered a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

311 Vegetation, Fish and Wildlife Resources

Vegetative, fish, and wildlife resource conditions in and adjacent to the proposed degassification wells are discussed in Section 320 of this submittal and the approved M&RP.

312 Potential Impacts to Vegetative, Fish, and Wildlife Resources

Potential impacts to vegetative, fish, and wildlife resources and the associated mitigation plan is presented in Section 330 and 340 of this chapter.

313 Description of Reclamation Plan

The reclamation plan used to restore the vegetative, fish, and wildlife resources to a condition suitable for the post mining land use is presented in Section 340.

320 ENVIRONMENTAL DESCRIPTION

321 Vegetation Information

This section and the approved M&RP contain the environmental descriptions of the vegetation for the permit and adjacent areas.

Andalex Resources has been drilling "gob" gas vent holes as a safety requirement necessary to conduct their coal mining operations within the plateaus of the Book Cliffs mountain range. Because of the extreme urgency of the situation in early 2005, permitting of some emergency gas holes began in January 2005, with drilling proceeding soon afterwards. Initially, drill holes numbered GVH-01, GVH-02, GVH-03 were proposed for drilling (GVH-02 was later dropped from the plan). Following these drilling activities, additional drilling was necessary in the late-winter/early spring months the same year (sites: GVH-05 and GVH-06). Because it was necessary for the drilling to proceed during in the winter and spring months, or when quantitative assessment of the impacted plant communities was not possible, Andalex employed "**Range Site**" methods in the permitting process to drive the revegetation plan and provide final revegetation standards of success. More gas holes were necessary for venting requirements in the spring of 2005 beginning with GVH-04. Prior to disturbance by the drill rig, the plant communities to be impacted by the drilling operations were quantitatively sampled including the proposed access road and drill pad. Additionally, a "**Reference Area**" with the same plant community was sampled. The Reference Area was used for comparisons of the proposed disturbed site at that time and will also be used at the time of final reclamation for standards of final revegetation success.

The next completed gob gas holes were numbered GVH-05A, GVH-07, GVH-08, and GVH-09. The plant communities that would be impacted by these drilling operations were quantitatively sampled in the growing season of 2005. Reference Areas were also chosen and sampled for these communities during the same time period. The following document was submitted to Andalex to report the results of the 2005 vegetation sampling period; and is included in Attachment 3-1 of this Appendix:

VEGETATION OF THE GAS VENT HOLES:
GVH-04, GVH-05A, GVH-07, GVH-08,
GVH-09 & REFERENCE AREAS
2005

for the
CENTENNIAL MINE

by
MT. NEBO SCIENTIFIC, INC.

January 2006

Because the aforementioned emergency drill sites GVH-01, GVH-03, GVH-05 and GVH-06 were constructed in the winter and early spring months, or before vegetation sampling could be conducted, Reference Areas for them were chosen later in the growing season of 2005 when a better assessment of them could be made. These Reference Areas will be used later as standards for final revegetation success at these sites instead of using the Range Site method mentioned above. Based on a qualitative assessment of these sites, the **Sagebrush/Grass Reference Area** as reported in the above document will be used for the emergency, or first drill sites.

Three additional gob gas holes were approved in 2006 - GVH #5B, GVH #7A and GVH #8A. Required vegetation information for each of these sites is included in a report generated by Mt. Nebo Scientific which has been included in Attachment 3-1 - Vegetation Inventory - Approved Holes GVH-1 through GVH-9.

Note: GVH#5B was not drilled and has been eliminated.

Fifteen additional gob gas holes were later proposed - GVH#10, GVH#10A, GVH#11, GVH#11A, GVH#12, GVH#12A, GVH#13, GVH#13A, GVH#14, GVH#14A, GVH#15, GVH#15A, GVH#16, GVH#16A, and GVH#17.

Required vegetation information for the proposed sites in included in a new report generated by Mt. Nebo Scientific which is included as Attachment 3-5 - Vegetation Inventory - Proposed Holes GVH-10 through GVH-17. It should be noted that quantitative data were sampled and recorded for each of the proposed primary site locations GVH-10 through GVH-17, in the growing season of 2006. Appropriate reference areas were also chosen and sampled at that time. As with the soils, it was determined with the Division,

that because of the vast amount of data and the consistency of the proposed site vegetation, additional sampling would not be required for each of the proposed alternate holes GVH-10A through GVH-16A. Instead, each of these holes will be evaluated separately based on available data for similar or adjacent sites.

The vegetation reports for Attachment 3-5 will consist of 2 separate reports. The main report will address all sampling and data collection for the primary proposed sites, GVH-10 through GVH-17. The second report will address the proposed alternate sites GVH-10A through GVH-16A, along with extrapolated data and conclusions for each of these sites.

The reports are entitled as follows:

VEGETATION OF THE GAS VENT HOLES:
GVH-10, GVH-11, GVH-12, GVH-13, GVH-14, GVH-15, GVH-16, GVH-17, &
REFERENCE AREAS
2006
FOR THE
CENTENNIAL MINE

VEGETATION DESCRIPTIONS OF THE INTERMEDIATE GAS VENT HOLES:
GVH-10 through GVH-17
2006
FOR THE
CENTENNIAL MINE

321.100 Plant Communities Within the Proposed Permit Area

Plate 19A of the M&RP shows the sites to be generally in the sagebrush-grass, aspen and oak brush communities. Vegetation specific to each of the sites is provided in this Appendix. A qualitative vegetative inventory (analysis) was completed during the summers of 2005 and 2006. (See Attachment 3-1 and 3-5)

Also, ARI has taken photographs of the proposed sites prior to disturbance. These photo locations are identifiable and repeatable. Although the photo locations were not staked, landmarks in the photos provide for identification as well as direction and location. The photos are included in Attachment 3-4.

321.200 Land Productivity Prior to Mining

Land productivity prior to drilling has been estimated at approximately 1800 pounds per acre, based on range sites of High Mountain Loam. This productivity is assumed for all completed holes GVH-1 through GVH-9, as well as for all proposed holes GVH-10 through GVH-17.

322 Fish and Wildlife Information

Fish and wildlife information associated with the degas wells is provided in this chapter. A summary of the fish and wildlife resource information for th permit and adjacent areas is contained in Section 322.100 through 322.200 of the approved M&RP.

322.100 Level of Detail

The scope and level of detail within the "Gob Gas Vent Holes" amendment are sufficient to design the protection and enhancement plan for wildlife and fish associated with the degas wells. Additional information pertaining to fish and wildlife in the permit area is located in the M&RP.

322.200 Site-Specific Resource Information

Raptors - An aerial raptor nest survey was done of the area by the Utah Division of Wildlife Resource personnel in 2004. The results of the survey are provided in Appendix D of the M&RP. Additional surveys have been done in 2005 and 2006, and are included with this submittal in the Confidential Binder for the Centennial Project.

A raptor survey will be conducted of the well site areas, each year that the wells are in operation.

Bats - No known open mine shafts, caves, adits or other man made structures that might provide habitats for bats are known to exist in the degas project area. The sites are open and the lack of a food source would force the bats to seek habitat and nourishment elsewhere.

Threatened and Endangered Plant and Wildlife Species - There are no known federally or state listed threatened and endangered plant and wildlife species within the sites planned for degassification wells. This is based on research and analysis by Mt. Nebo Scientific of Springville, Utah and EIS of Helper Utah as well as on-site evaluation by UDOGM specialists. The Bureau of Land Management has also reviewed the access and drill sites and has stated that although this area represents important habitat for both Mule deer and Elk, it is not characterized as crucial or critical.

Sage Grouse - Sage Grouse leks are known to exist within a mile or two north of the proposed drill sites in the park area. Therefore it is possible that the drill sites may be within Sage Grouse nesting areas. Prior to construction of any drill site an on-the-ground reconnaissance of the area will be conducted by knowledgeable wildlife biologists. If any nesting areas are found near the proposed drill sites the drill sites will be moved (in an east-west direction) in order to avoid the nest. Road access to the drill sites (including future sites) will be from the south, through Deadman Canyon rather than from the north through the park.

There are no known groundwater or surface water flows to the Colorado or Green Rivers with potential for impact by the drilling of the degas wells. Potential adverse affects to the four Colorado River endangered fish species (refer to Table 3-2) would

not be likely since there is no direct route to the Colorado River or Green River from the proposed well locations. Per the Windy Gap Process consumption estimates for the degas wells are as follows: Drilling - approximately 100,000 gallons per hole; road watering - approximately 5,000 gallons per day for 70 days per year; evaporation from ventilation - zero, drill holes will not intersect the coal seam being mined, therefore no access to mine ventilation until after area is sealed; coal preparation - zero, no coal preparation at degas sites (see Sections 522 and 523); sediment pond evaporation - zero, no sediment pond at degas sites (see Section 732.200); subsidence effects on springs - zero, no anticipated subsidence at degas sites (see Section 525); alluvial aquifer abstraction into mines - zero, no alluvial aquifer abstractions associated with degas drill holes (see Sections 513.500 and 600); postmining inflow to workings - zero, no workings for postmining inflow associated with degas wells (see Sections 513.500 and 600); coal moisture loss - zero, no coal therefore no moisture loss (See Sections 522 and 523). The overall impact of the mining operations, (including the degas holes) is shown on Table 3-2. Based on these calculations, the mining operation has a net positive impact to the Colorado River Drainage by the addition of 45.001 ac.ft./year.

Table 3-1
Federal and State Listed, Threatened, Endangered and Candidate Species
Plants and Wildlife
Carbon County, Utah
October, 2002

CARBON

Graham Beardtongue	*Penstemon grahamii*
Uinta Basin Hookless Cactus	*Schlerocactus glaucus*
Bonytail[4, 10]	*Gila elagans*
E	
Colorado Pikeminnow[4, 10]	*Ptychocheilus lucius*
Humpback Chub[4, 10]	*Gila cypha*
E	
Razorback Sucker [4, 10]	*Xyrauchen texanus*
E	
Bald Eagle [3]	*Haliaeetus leucocephalus*
T	
Mexican Spotted Owl [4]	*Strix occidentalis lucida*
T	
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*
Black-footed Ferret [6]	*Mustela nigripes*
E	

1 Nests in this county of Utah
2 Migrates through Utah, no resident populations.
3 Wintering populations (only five known nesting pairs in Utah).
4 Critical habitat designated in this county.
5 Critical habitat proposed in this county
6 Historical range.
7 Experimental nonessential population
8 Introduced, refugia population.
9 Candidate species have no legal population under the Endangered Species Act. However, these species are under active consideration by the Service for addition to the Federal List of Endangered and Threatened Species and my be proposed or listed during the development of the proposed project.
10 Water depletions from any portion of the occupied drainage basin are considered to adversely affect or adversely modify the critical habitat of the endangered fish species, and must be evaluated with regard to the criteria described in the pertinent fish recovery programs.

For additional information contact: U.S. Fish and Wildlife Service, Utah Field Office, 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119 Telephone (801) 975-3330.

Table 3-2
Potential Water Depletion
to
Colorado River Drainage

The following calculations are intended to define the potential depletion or addition of water to the Colorado River Drainage System, as a result of mining at this operation. It should be noted that the criteria is based on the U.S. Fish and Wildlife Service Windy Gap Process, and only those parameters that apply to this operation have been calculated.

Projected Water Depletion

1- Bathhouse/Office
   a. 140 people @ 35 gpd/ea x 240 days/yr = 1,176,000 gal/yr

2- Ventilation
   a. Evaporation
      1) 450,000 cfm = 236,520 M cf/yr
      2) 2.5 gallon/M cf = 591,300 gal/yr

3- Drilling GVH Wells
   a. 5 holes/yr @ 100,000 gal/hole = 500,000 gal/yr

4- Road Watering (GVH Sites)
   a. 5,000 gpd x 70 days/yr = 350,000 gal/yr

Total Loss = 2,617,300 gal/yr
8.033 ac ft/yr

Projected Water Addition

1- Mine Discharge
   a. 100 gpm x 120 days/yr = 17,280,000 gal/yr

Total Gain = 17,280,000 gal/yr
53.034 ac ft/yr

Summary

Projected Depletion = -8.033 ac ft/yr
Projected Addition = +53.034 ac ft/yr

Total Addition = +45.001 ac ft/yr

Note: Moisture loss from mined coal and use of sprays have not been included, since the spray water is derived from perched aquifers and is recycled within the mine. Any excess water from the perched aquifers is eventually discharged, resulting in the addition to streamflow.

322.300 Fish and Wildlife Service Review

If requested, Andalex Resources, Inc. authorizes the release of information pertaining to Section 322 and 333 to the U.S. Fish And Wildlife Service Regional and Field Office for their review.

323 Maps and Aerial Photographs

Location of the well sites can be seen in Figure 1-1 of this submittal.

323.100 Location and Boundary of Proposed Reference Area

Reference areas for all well sites have been established as described in Section 321. Subsequent holes will also use standard reference areas including baseline data.

323.200 Elevation and Locations of Monitoring Stations

N/A

323.300 Facilities for Protection and Enhancement

Section 333.300 and 358.500 of the approved M&RP contain additional discussion pertaining to protective measures to be taken by Andalex Resources, Inc.

323.400 Vegetation Type and Plant Communities

Vegetative types and plant communities are outlined in the vegetative reports in Attachments 3-1 and 3-5.

330 OPERATION PLAN

331 Measures Taken to Disturb the Smallest Possible Area

The well sites will be sized to disturb the smallest acreage possible and still meet the requirements for the drilling equipment. The drainage control required will be built to satisfy the environmental requirements. Please refer to the typical proposed site plans for the gob gas wells which show estimated dimensions, location and type of sediment control, location of topsoill storage as well as approximate size and set-up of equipment.

332 Description of Anticipated Impacts of Subsidence

Refer to Section 525.

333 Plan to Minimize Disturbances and Adverse Impacts

General control and mitigation measures addressing potential related biological impacts will include the following:

- Well sites will be fenced per landowner requirements and suitable for wildlife protection.
- Minimizing the total area of disturbance.
- Yearly raptor surveys during operations.
- Utilizing existing roads where possible.
- Water used for drilling and dust suppression is pumped from mine.
- Providing erosion protection and dust control as needed on roads.
- Design, construction and operation of well sites to minimize adverse impacts.
- Coordination and planning with the interdisciplinary wildlife team.
- Reclamation of disturbed areas when no longer needed.

333.100 Minimize Disturbance to Endangered or Threatened Species

Andalex Resources, Inc. will apply all methods necessary to minimize disturbances or any adverse effects to threatened or endangered species. Note that T&E species are not anticipated to be discovered, however, should ARI determine that such species exist, the regulatory authority will be notified and appropriate remedial action taken. Also, See Section 322.200.

333.200 Species and Habitats

All species and habitats within the permit area will be protected to the best of Andalex Resources, Inc. ability. Note that T&E species are not anticipated to be discovered, however, should ARI determine that such species exist, the regulatory authority will be notified and appropriate remedial action taken.

333.300 Protective Measures

Refer to Section 333.300 of the approved M&RP, and Section 333 above. All well sites will be fenced and road construction will be minimized by utilizing existing roads where possible.

340 RECLAMATION PLAN

341 Revegetation

Revegetation of the sites will occur in two phases. The first phase is to redistribute topsoil and seed the well area not needed for access and operation of the gas exhaust blower. The second phase will consist of plugging the well and distributing the remaining topsoil and seeding on the remaining pad area. Refer to Section 242.100 for additional detail.

The second phase will consist of plugging the well and distributing the remaining topsoil and seeding on the remaining pad area. Refer to Section 242.100 for additional detail.

The short-term goal of this revegetation plan is the immediate stabilization of the disturbed sites through erosion control this objective will be achieved through controlled grading practices, proper seedbed preparation to encourage rapid plant establishment, inclusion of rapidly establishing species in the seed mixture to be planted, and mulch application.

The long-term goals are to establish useful, and productive range. These goals will be attained through the selection and placement of desirable and productive plant species and a commitment to monitor and maintain revegetated areas throughout the bond liability period.

The well sites will be fenced to discourage wildlife and livestock from grazing the reclaimed areas until bond release.

341.100 Schedule and Timetable

The reclamation timetable shown in Figures 5-6 of this submittal and the reclamation monitoring schedule is found in Chapter 2, R645-301-240 of the approved M&RP.

341.200 Descriptions

Species and Amounts of Seed - The well sites will be planted with the seed mix listed on Table 3-3. The seed mix will be used in both contemporaneous and final reclamation phases. The seed will be incorporated with a small amount of wood fiber mulch and applied by hydroseeding equipment or broadcast. Refer to Section 234.200 for topsoil stockpile seeding description.

Methods Used for Planting and Seeding - The degassification sites will be graded to final contour, then ripped to relieve compaction. The depth of ripping will be from 18 to 24 inches. Following ripping, topsoil will be applied to the ripped surface and left in a gouged and roughened state.

Mulching Techniques - Wood fiber mulch will be applied on top of the seed with hydroseeding equipment at the rate of 2,000 pounds per acre and anchored with a tackifier.

Irrigation, Pest, and Disease Control - No irrigation is planned and pesticides will not be used unless previously approved by the Division.

Measures Proposed for Revegetation Success - Refer to Section 356.

341.300 Greenhouse Studies, Field Trials, or Other Equivalent Studies

Refer to the Section 341.300 of the approved M&RP.

342 Fish and Wildlife

342.100 Enhancement Measures

Post bond release enhancement measures will include the establishment of vegetation for wildlife food, cover, and the break up of large blocks of monoculture to diversify habitat.

342.200 Plants Used for Wildlife Habitat

Nutritional Value - The nutritional value will be consistent with that of vegetation in the surrounding areas.

Cover - Cover will be comparable to the cover on the associated reference area.

342.300 Cropland

Cropland is not a postmining land use.

342.400 Residential, Public Service, and Industrial Land Use

No residential, industrial or public service use is planned.

350 PERFORMANCE STANDARDS

351 General Requirements

Andalex Resources, Inc. commits to conduct all operations in accordance with the plans submitted in Sections R645-301-330 through R645-301-340 of the permit application.

352 Contemporaneous Reclamation

Reclamation activities prior to final reclamation will, to the extent feasible, be performed contemporaneously. Contemporaneous reclamation will be performed at the well sites following construction of the wells. Refer to Section 341 for additional details.

353 Revegetation: General Requirements

A vegetative cover will be established on all reclaimed areas to allow for the designated postmining land use of grazing. Refer to Section 411 for additional information.

353.100 Vegetative Cover

The seed mix proposed for revegetation is intended to provide vegetative cover that will be diverse, effective, and permanent. The seed mixture was selected with respect to the climate, potential seedbed quality, erosion control, drought tolerance, and the mixture's ability for quick establishment and spreading.

Native Species - The reclamation vegetation mixture will be comprised of species indigenous to the area and capable of achieving the postmining land use. Diversity of species should allow utilization of plants by wildlife and domestic livestock. The recommended seed mix is comprised of native species.

Extent of Cover - The vegetative cover will be at least equal in extent to the cover at the designated reference areas.

Stabilizing - The vegetative cover mixture is capable of stabilizing the soil surfaces from erosion.

353.200 Reestablished Plant Species

Compatible - The reestablished plant species have been selected to ensure their compatibility with the approved postmining use.

Seasonal Characteristics - The revegetation plant species will have the same growing season as the adjacent areas.

Self-Generation - The reestablished plants are species capable of self-generation and plant succession.

Compatibility - The seed mix suggested for revegetation contains plants native to the area and compatible with the plant and animal species of the permit area.

Federal and Utah Laws or Regulation - The seed mix purchased to revegetate the degassification well sites will contain no poisonous or noxious plants (see Section 234.200). No species will be introduced in the area without being approved by the Division.

Table 3-3
Reclamation Seed Mix

The final reclamation seed mixture from the Centennial MRP will also be used for all interim, contemporaneous reclamation on the Gob Gas project sites and road slopes:

SPECIES	# PLS/acre
Grasses:	
Leymus cinereus Great Basin Wildrye	2.0
Agropyron spicatum Bluebunch Wheatgrass	2.0
Agropyron trachycaulum Slender Wheatgrass	2.0
Bromus inermis Smooth Brome	3.0
Oryzopsis hyminoides Indian Ricegrass	2.0
Poa sandbergii (secunda) Sandberg Bluegrass	0.25
Forbs:	
Artimisia ludoviciana Louisiana Sagebrush	0.1
Hedysarum borealis Northern Sweetvetch	1.0
Linum lewisii Lewis Flax	1.0
Penstemon strictus "Bandera" Rocky Mountain Penstemon	0.25
Shrubs:	
Amelanchier alnifolia Serviceberry	1.0
Artemisia tridentara vaseyana Mountain Big Sagebrush	0.2
Cercocarpus montanus True Mountain Mahogany	1.0
Cercocarpus ledifolius Curlleaf Mountain Mahogany	1.0
Chrysothamnus nauseosus albicaulis Whitestem Rubber Rabbitbrush	1.0
Purshia tridentata Bitterbrush	3.0
Symphoricarpos oreophilus Mountain Snowberry	1.0
Total	**21.8**

Rate is pounds Pure Live Seed per acre for drill seeding. Broadcast seeding is double the drill rate

Note: Sites GVH#1 and GVH#5 were reclaimed in October, 2009, but the seed mix also included approximately 5 pounds of Triticale at the request of the land-owner. Also, the seed mix was several years old, which may affect the germination success.

353.300 Vegetative Exception

Andalex Resources, Inc. does not require vegetative exception at this time.

353.400 Cropland

The permit area contains no land designated as cropland.

354 Revegetation: Timing

Andalex Resources, Inc. will follow the recommended guidelines for revegetation and planting during the first normal period for favorable planting conditions after replacement of the topsoil. In Utah the planting period is usually Fall due to the precipitation events.

355 Revegetation: Mulching and Other Soil Stabilizing Practices

Mulch and/or other soil stabilizing practices (roughing, etc.) Will be used on all areas that have been regraded and covered by topsoil (Section 341.200). Andalex, Resources, Inc. will exercise care to guard against erosion during and after application of topsoil.

356 Revegetation: Standards for Success

356.100 Success of Revegetation

The success of revegetation will be judged on the effectiveness of the vegetation for postmining land use, the extent of cover on each degassification well site compared to their respective reference areas as described in Section 321 and in Attachment 3-1.

Sampling Techniques - Andalex Resources, Inc. will comply with the standards for success, statistically valid sampling techniques for measuring success, and the approved methods outline in the Division's "Vegetation Information Guidelines, Appendix A" for sampling.

The sampling methods to be used during reclamation will be specific to the requirements at the time of reclamation. Nonetheless, according to the currently approved UDOGM guidelines, these sampling methods would be used: sample adequacy, cover (line interception), density (belt transects or plots) and productivity (clipping). The Jaccard's Community Coefficient will be used to calculate acceptable plant similarity and diversity.

Standards for Success - The standards for success will include criteria representative of undisturbed lands in the area of the degas wells as means to evaluate ground cover, production and stocking of the reclaimed site.

356.200 Standards for Success

Standards of success will be applied in accordance with the approved postmining land use as described in this section.

Grazing Land and Pasture Land - The ground cover and production of living plants on the revegetated area will be at least equal to the reference area.

Cropland - There is no area designated as cropland within the degassification well sites.

Fish and Wildlife Habitat - The postmining land use for the degas well sites will be wildlife habitat on pre-existing roads. Pre-existing roads will be returned to their approximate original contour and compacted.

Industrial, Commercial or Residential - The postmining land use for the permit area is not designated for industrial, commercial, or residential use.

Previously Disturbed Areas - N/A

356.300 Siltation Structures

Siltation structures will be maintained until the disturbed areas have been stabilized and revegetated. For additional details on siltation structures, see Sections 542 and 763 of this amendment.

356.400 Removal of Siltation Structures

The land on which siltation structures are located will be revegetated in accordance with the reclamation plan discussed in Section 353 and 357. Refer to Section 763 for additional information pertaining to the removal of siltation structures.

357 Revegetation: Extended Responsibility Period

Andalex Resources, Inc. will be responsible for the success of revegetation for a period of 10 years following seeding of the reclaimed area or upon Diviison bond release.

357.100 Extended Period Begins

The period of extended responsibility will begin after disturbed areas have been reseeded.

357.200 Vegetation Parameters

Vegetation parameters will equal or exceed the approved success standard during the last 2 years of the responsibility period. The success standards are outlined in Section 356 of this application.

357.300 Husbandry Practices

The use of husbandry practices are not being requested.

358 Protection of Fish, Wildlife, and Related Environmental Values

Andalex Resources, Inc. will minimize disturbances and adverse impacts on wildlife and their related environments as outlined in Section 333 of the approved M&RP and Section 342 of this submittal. See Chapter 7, Section 731.100 of the approved M&RP for methods to protect water sources in the area.

358.100 Existence of Endangered or Threatened Species

The well sites will not be constructed or operated where they might jeopardize the existence of any endangered or threatened species. Refer to Section 322.200 and Attachments 3-1, 3-2 and 3-3 for additional information pertaining to threatened, endangered, and sensitive species.

State or federally listed endangered or threatened species will be reported to the Division upon its discovery.

358.200 Bald and Golden Eagles

Andalex Resources, Inc. understands that there is no permission implied by these regulations for taking of bald or golden eagles, their nest, or eggs. If found, nests will be reported to the Division.

358.300 Taking of Endangered or Threatened Species

Andalex Resources, Inc. understands that there is no permission implied by these regulations for taking of endangered or threatened species, their nest, or eggs.

358.400 Replacement of Wetland or Riparian Vegetation

The sites contain no wetland or riparian vegetation.

358.500 Manmade Wildlife Protection Measure

Electric Power Lines - No utilities will exist at the well sites.

Potential Barriers - No potential barriers will exist at any of the well sites. No ponds exist at the well sites. Refer to Section 231.100 and 242 for information pertaining to the mud pit.

APPENDIX X

CHAPTER 4

(Revised)
January, 2010

CHAPTER 4
LAND USE AND AIR QUALITY

TABLE OF CONTENTS

LIST OF ATTACHMENTS

410 LAND USE

411 Environmental Description

A statement of the conditions and capabilities of the land to be affected by mining and reclamation operations follows in this section.

HISTORICAL BACKGROUND:

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

On May 11, 2007, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso Energy has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso Energy operating agreement is included as Attachment 1-1. The Oso Energy agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since the signing of the operating agreement, Oso Energy has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and 5). Oso Energy is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out

and/or sealed up, the term of the Oso Energy agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso Energy agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. All other GVH installations are considered a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

411.100 Premining Land Use

The area is utilized for the landowners private use, including hunting and as open range for livestock and wildlife.

411.110 Land Use Map and Narrative

Refer to the same section of the approved M&RP.

411.120 Land Capability

The major plant communities at the well sites are identified in Section 321. No cultivated lands lie within the well boundaries, due to the limiting terrain and lack of water for irrigation. Refer to Section 321.200, of this submittal for forage production per acre for each well site.

411.130 Land Use Description

The wells are located on land administered by Dave R. & Mildred Cave, et al., Mathis Land, Inc., and David Shimmin, and zoned by Carbon County for mining and grazing (MG-1).

Oso Energy Corp. has installed substantial industrial facilities on or immediately adjacent to the well sites, including a compressor station, distribution and collection pipelines, and several directional gas wells.

411.140 Cultural and Historic Resources Information

For Gob Gas Holes 1, 3, 4, 5 and 6, preliminary research and file search has been conducted by Senco-Phenix of Price, Utah and the research indicates that there is a very low probability of the occurrence of cultural resources at the proposed drill sites. Senco-Phenox has also completed a Cultural Resource Survey of the approved sites GVH#5A,

#7A was a re-drill on the existing disturbed pad of GVH #7, which as been previously surveyed for archeological resources.) Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding. Results of these surveys are included in Attachment 4-1 "Cultural Resources Survey and Inventory - Approved Holes GVH-1 through GVH-9".

A total of 15 additional well sites were later proposed - GVH#10, GVH#10A, GVH#11, GVH#11A, GVH#12, GVH#12A, GVH#13, GVH#13A, GVH#14, GVH#14A, GVH#15, GVH#15A, GVH#16, GVH#16A, GVH#17. Each of the proposed hole locations (GVH#10 through GVH#17) along with access corridors, has had an intensive cultural resource survey and inventory completed on them. The results of these surveys are included in Attachment 4-3 - "Cultural Resource Survey and Inventory - Proposed Holes GVH-10 through GVH-17".

It should be noted that all sites had findings of "No Effect" and all were recommended for Archaeological Clearance.

Andalex Resources, Inc. agrees to notify the Division and State Historical Preservation Office (SHPO) of previously unidentified cultural resources discovered in the course of operations. Andalex also agrees to have any such cultural resources evaluated in terms of NRHP eligibility criteria. Protection of eligible cultural resources will be in accordance with Division and SHPO requirements. Andalex will also instruct its employees that it is a violation of federal and state low to collect individual artifacts or to otherwise disturb cultural resources.

411.200 Previous Mining Activity

Andalex Resource, Inc. has no knowledge of previous removal of coal or other minerals in the well site areas. Presently, there is on-going methane gas extraction conducted by Oso Energy Inc. In the immediate area.

412 Reclamation Plan

412.100 Postmining Land-Use Plan

All uses of the land prior to the wells construction/operation and the capacity of the land to support prior alternate uses will remain available throughout the life of the sites.

Andalex Resource, Inc. intends the postmining land use to be livestock and wildlife grazing and other uses as indicated by the land owner (hunting, etc.). Also, the land surface owners have signed agreements with Oso Energy Resources Corp. wherein Oso has been granted the right to tap into all GVH well sites (with the exception of GVH 1 and GVH 5, which are now reclaimed) and has subsequently installed buried collection lines and tap

structures to all GVH sites. Final reclamation activities will be completed in a manner to provide the lands to parallel the premining land use and to honor the terms of the landowners agreement with Oso Energy Corp, as well as the Company's operating agreement with Oso Energy.

412.200 Land Owner or Surface Manager Comments

Surface lands are owned by Dave R. & Mildred Cave, et al., Mathis Land, Inc., and Divid Shimmin. Appropriate landowner approvals have been obtained for the proposed wells. Required notification of drilling will be sent to the landowners prior to start. Memorandum of surface owner agreements are included in Appendix 4-2 of Appendix X.

413 Performance Standards

413.100 Postmining Land Use

Postmining land uses are discussed in Section 412.100. The postmining lands will be reclaimed in a timely manner and capable of supporting such uses (see Chapters 2, 3, 5 and 7).

413.200 Determining Premining Uses of Land

Refer to Section 411.100.

413.300 Criteria for Alternative Postmining Land Use

No alternative postmining land uses have been planned.

414 Alternative Land Use

No alternative postmining land uses have been planned.

420 AIR QUALITY

421 Air Quality Standards

Gob gas vent hole activities will be conducted in compliance with the requirements of the Federal Clean Air Act and the Utah Air Conservation Rules.

422 Compliance Efforts

See Fugitive Dust Control Plan, Section 424.

423 Monitoring Program

Refer to the same section in the approved M&RP

424 Fugitive Dust Control Plan

Operational areas that are used by mobile equipment will be water sprayed to control fugitive dust. The application of water will be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition unless it is below freezing.

425 Additional Division Requirements

Refer to the same section of the approved M&RP.

APPENDIX X

CHAPTER 5

(Revised)
SEPTEMBER, 2009

CHAPTER 5
ENGINEERING

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510 INTRODUCTION

This chapter provides a discussion of general engineering aspects, an operation plan, a reclamation plan, design criteria, and performance standards related to the degassification well sites. The activities associated with the construction and reclamation of the well sites have been or will be designed, located, constructed, maintained, and reclaimed in accordance with the operation and reclamation plans.

Designs and other information herein presented may be of a general nature or in the form of typicals for proposed sites not yet accessible for detailed surveying or studies. Site specific information will be provided in this chapter as it becomes available.

HISTORICAL BACKGROUND:

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

On May 11, 2007, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso operating agreement is included as Attachment 1-1. The Oso agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since the signing of the operating agreement, Oso has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and

5). Oso is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out and/or sealed up, the term of the Oso agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. . All other GVH installations are maintained as a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation

Because the overall status of the GVH sites changes frequently as a result of mine plan changes, the company commits to update the Division annually as to the current status of all GVH sites. This will be done as part of the annual report.

511 General Requirements

The permit application includes descriptions of construction, maintenance, and reclamation operations of the completed and proposed well sites with maps and plans. Potential environmental impact as well as methods and calculations utilized to achieve compliance with the design criteria are also presented.

Completed holes are GVH#1, GVH#3, GVH#4, GVH#5, GVH#5A, GVH#6, GVH#7, GVH#7A, GVH#8, GVH#8A, and GVH#9. The following is a list of holes were approved in May, 2007 - GVH#10, GVH#10A, GVH#11, GVH#11A, GVH#12, GVH#12A, GVH#13, GVH#13A, GVH#14. GVH#14A, GVH#15, GVH#15A, GVH#16, GVH#16A and GVH#17. All holes are shown on Figure 1-1.

Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

512 Certification

Where required by the regulations, cross sections and maps in this permit application have been prepared by or under the direction of, and certified by, qualified registered professional engineers or land surveyors. As appropriate, these persons were assisted by experts in the fields of hydrology, geology, biology, etc.

512.100 Cross Sections and Maps

Cross sections for the degassification well pads are provided upon completion of surveys. Typical road cross sections are shown on Figure 5-5.

512.200 Plans and Engineering Designs

Excess Spoil - No excess spoil will be generated from the well sites.

Durable Rock Fills - No durable rock fills will exist at the well sites.

Coal Mine Waste - No coal mine waste will exist at the well sites.

Impoundments - Refer to Section 733.200 of this submittal.

Ancillary Roads - Short sections of road may be required to access certain well sites. Topsoil will be stripped from the road alignment and stored with the topsoil stripped from the pad area prior to grading the new access road. When possible, well sites will be placed on existing roads.

Existing and proposed access routes to all well sites are shown on Figure 1-1 of this Appendix.

Variance from Approximate Original Contour - No variance from approximate original contour is required for the well sites.

513 Compliance with MSHA Regulations and MSHA Approval

513.100 Coal Processing Waste Dams and Embankments

No coal processing waste dams and embankments will exist at the well sites.

513.200 Impoundments and Sedimentation Ponds

Refer to Section 733.200 of this submittal.

513.300 Underground Development Waste, Coal Processing Waste, and Excess Spoil

No underground waste, coal processing waste, and excess spoil will exist at the well sites.

513.400 Refuse Piles

No refuse piles will exist at the well sites.

513.500 Underground Openings to the Surface

The well will be equipped with a valve that will be closed and locked when not in use. A

typical well head is shown in Figure 5-4.

513.600 Discharge to Underground Mine

No discharge to the underground mine will occur at the well sites.

513.700 Surface Coal Mining and Reclamation Activities

No surface coal mining, or reclamation activities associated with surface coal mining will occur at the well sites.

513.800 Coal Mine Waste Fire

No coal waste will be developed, therefore, no coal waste fires will occur at the well sites.

514 Inspection

514.100 Excess Spoil

No excess spoil will be stored at the well sites.

514.200 Refuse Piles

No refuse piles will exist at the well sites.

514.300 Impoundments

Refer to Section 7133.200 of this submittal.

515 Reporting and Emergency Procedures

515.100 Slides

Refer to Section 515.100 in the approved M&RP.

515.200 Impoundment Hazards

No impoundments will exist at the well sites.

515.300 Temporary Cessation of Operations

If temporary cessation of the mining operations does occur, the wells will remain open. Once liberation of the gob gas is completed, the wells will be sealed as discussed in Section 542.700 of this submittal.

520 OPERATION PLAN

521 General

Detailed maps are provided of each of the well sites when conditions allow access.

521.100 Cross Sections and Maps

Existing Surface and Subsurface Facilities Features - No buildings are located on or within 1,000 feet of any of the well sites.

Landowner, Right-of-Entry, and Public Interest - The land which the wells will be drilled on is owned by Dave R. & Mildred Cave, et al., and Mathis Land, Inc. Andalex Resources, Inc. has completed landowner agreements to allow access for the construction and drilling of the wells (see Attachment 4-2).

Mining Sequence and Planned Subsidence - Refer to Section 525.

Land Surface Configuration - Surface contours of undisturbed well sites will be included when completed.

Surface Facilities - No permanent surface facilities will exist at the well sites.

521.200 Signs and Markers

Mine and Permit Identification Signs - A mine and permit identification sign will be displayed at each well site. This sign will be a design that can be easily seen and read, will be made of durable material, will conform to local regulation, and will be maintained until after the release of all bonds for the well site areas. The sign will contain the following information:

- Mine name,
- Company name,
- Company address and telephone number,
- MSHA identification number, and
- Permanent program permit identification number

Perimeter Markers - The perimeter of all areas affected will be clearly marked before beginning drilling activities. The markers will be a design that can be easily seen and read, will be made of durable material, will conform to local regulations, and will be maintained until after the release of all bonds for the permit area.

Buffer Zone Markers - Stream buffer zone markers will not be required at any of the well

sites.

Topsoil Markers - Markers will be placed on all topsoil stockpiles. These markers will be a design that can be easily seen and read, will b made of durable material, will conform to local regulations, and will be maintained until topsoil is redistributed on the well sites.

Construction Markers - Not applicable.

522 Coal Recovery

No coal recovery will be performed at the well sites.

523 Mining Methods

No mining will be performed at the well sites.

524 Blasting and Explosives

No explosives are to be used at the well sites.

525 Subsidence

No subsidence will occur at the well sites, as a result of drilling and development of the degassification well sites. Subsidence could occur at the well site because of underground mining see Section 525 of the approved M&RP.

526 Mine Facilities

526.100 Mine Structures and Facilities

No buildings exist or are proposed at the well sites; therefore, no existing building will be used in connection with or to facilitate this proposed coal mining and reclamation plan.

526.200 Utility and Support Facilities

No utilities are to be installed at the well sites. A portable exhaust unit will be temporarily installed to draw gob gas to the surface from the mined panel. The exhaust blower will be started by using propane from portable tanks. Once started and running, the unit will be powered by burning the extracted gas. Excess gob gas will be vented to the atmosphere. The blower is approximately 12-feet long by 6-feet wide and about 10-feet tall. It is not known how long the degassification of the longwall panel will take.

527 Transportation Facilities

527.100 Road Classification

Well sites will be developed near existing private roads whenever possible. The new access roads will be classified as ancillary roads and will be maintained by the permitee.

527.200 Description of Transportation Facilities

The well sites have been chosen close to existing roads whenever possible in the area to limit surface disturbance. The existing roads were constructed and are maintained by the land owner. The existing roads are approximately 16 feet wide. See Figure 5-5 for a typical cross section of the existing roads.

The following is a description of each of the roads used to access the GVH Sites:

Right Fork of Deadman Canyon - This road is located in the bottom of Deadman Canyon north of the Centennial Project Minesite surface facilities. The road was existing, constructed by the surface owner; however, it did require minor drainage control upgrades in the form of 18" and 24" culverts, and slight widening of sharp turns for drilling equipment access. This road is approximately 12,300' long with an average slope of 11.79% and is approximately 16' wide. The road runs from the Centennial Minesite to the top of the ridge. The road is native rock and gravel surfaced, and is protected from runoff by a combination of berms, road ditches and culverts. This road will remain in place upon completion of the drilling project.

GVH-5 - This road runs from the top of Deadman Canyon along the fence line past the GVH-5 Site. This is an existing road, approximately 16' wide, 4400' in length, with an average slope of approximately 5.00%. The road is constructed on native material and protected from runoff by berms, ditches and culverts as needed. From this existing road a short (250') road was constructed to the drill site. This short segment has been reclaimed in 2009.

GVH-5A - This road was constructed from an existing road (see GVH-5) west approximately 800' to GVH-5A. The road is approximately 16' wide with a slight slope to the pad. This road will be reclaimed when no longer used.

GVH-5B - This site was originally proposed approximately halfway between GVH-5 and GVH-5A but has been eliminated due to changes in the mining plan.

GVH-1 - This is a short section of road running from an existing road to the GVH-1 Site. The road has been reclaimed in 2009.

GVH-6 - This road is constructed from an existing road. The newly constructed segment is approximately 16' wide, 1500' long and has an average slope of 2.67%. It is constructed on native material, with gravel used as needed on soft areas. Drainage is controlled by a combination of ditches and berms. This road will be removed and reclaimed when no longer used unless otherwise directed by the landowner.

Ridge Road - This is an existing road along the ridge above the Right and Left Forks of Deadman Canyon. The road is approximately 16' wide, 7100' long and has an average grade of 3.10%. It runs westward from the top of the Right Fork of Deadman Canyon to the turnoff to the road to GVH-9. The road is constructed on native material and being on the ridgeline, has need for only minimal drainage control in the form of ditches where needed. This road will remain in place after the project is completed.

GVH-3 - This is an existing road from the Ridge Road to the GVH-3 Site. The road is approximately 16' wide, 1200' long and has an average grade of 4.17%. The road is constructed on native material and hydrologic controls consist of berms and ditches. This road is not scheduled for removal after the project is completed.

GVH-7 - This section of road is from GVH-3 to GVH-7 and is a continuation of the existing road to GVH-3. This section is approximately 16' wide, 1600' long and at an average grade of 8.13%. The road is constructed on native material and hydrologic controls are primarily from ditches. This road is also scheduled to remain after the project.

GVH-7A - This site will be a re-drill of existing site GVH-7, and will use the existing access road to GVH-7.

GVH-8 - This is a newly constructed road from GVH-4 to GVH-8. The road is approximately 16' wide, 1700' long and at an average grade of 8.0%. The road is on native material and hydrologic controls are primarily from ditches. This road will be reclaimed when no longer used unless otherwise directed by the landowner.

GVH-8A - This site is accessed by a short spur road to be constructed from the road which presently provides access to GVH-8. The spur road is approximately 650' long, 16' wide with an average grade of approximately 7.5%. The road is constructed on native material with runoff control primarily by berms. The spur road will be removed and reclaimed unless otherwise directed by the landowner.

GVH-4 - This newly constructed road runs from the Ridge Road to the GVH-4 Site. It is approximately 16' wide, 1100' long at an average grade of approximately 3.64%. The road was constructed on native material, and runoff is controlled by ditches and berms with containment on the pad. This road will be removed and reclaimed when no longer used unless otherwise requested by the landowner.

GVH-9 - This is an existing road from the Ridge Road to the GVH-9 Site. The road is approximately 16' wide, 3500' long and has an average grade of approximately 8.14%. The road is constructed on native material and runoff is controlled by ditches and berms. Since this is also an existing road, it will not be removed unless requested by the landowner.

GVH-10 - This site has been eliminated

GVH-10A - This site has been eliminated

GVH-11 - This site is on the existing road below GVH-6. The road is approximately 16' wide at an average grade of -5.00%. The existing road is on native material with drainage controls primarily by ditches or berms. This road is not scheduled to be removed.

GVH-11A - This road will be constructed from the existing road at site GVH#11. The constructed road will be approximately 450' in length, 16' wide and at an average grade of -8.88%. The road will be built on native material with runoff control by ditches or berms. This road is scheduled to be removed and reclaimed.

GVH-12 - This road was constructed from the above referenced road to GVH#11. It is approximately 600' in length, 16' wide and at an average grade of -10.00%. It is built on native material and runoff control will be primarily from ditches or berms. This road will be removed and reclaimed.

GVH-12A - This road will be constructed from the above referenced road to GVH#12. The new road will be approximately 600' long, 16' wide at an average grade of -7.5%. It will be built on native material with runoff control by ditches or berms. This road is also planned to be removed and reclaimed.

GVH-13 - This site is on an existing road on the east side of the Right Fork of Summit Creek, as shown on Figure 1-1. The road is approximately 16' wide and at an average grade of -6.67%. It is built on native material with runoff control by ditches. This road is not scheduled to be removed and reclaimed at the completion of operations.

GVH-13A - This site is on an existing road below GVH-7. The existing road is approximately 16' wide and at an average grade of -8.13%. The road is constructed on native material with hydrologic controls primarily from ditches. This road is scheduled to remain.

GVH-14 - This site is also located on the existing road below GVH-7 as referenced above. It is also approximately 16' wide, on native material with runoff control by ditches. This road will also remain after the project.

GVH-14A - This site is also on the above referenced existing road for GVH-13A and GVH-14. The road is approximately 16' wide and constructed on native material. Runoff control is primarily by ditches. This road will also remain after the project.

GVH-15 - This is a newly constructed road from the existing road below GVH-8. The new road is approximately 600' long, 16' wide and have an average grade of -10.83%. It is constructed on native material with runoff control by ditches and/or berms. This road will be removed and reclaimed.

GVH-15A - This site is located on an existing road. It is not scheduled to be removed.

GVH-16 - This site is on the existing road below GVH-9. The existing road is approximately 16' wide with an average grade of - 8.14%. The road is on native material with ditches and berms for runoff control. This road is scheduled to remain.

GVH-16A - This site will be accessed by a new road constructed from the above referenced road below GVH-9. The new road will be approximately 500' long, 16' wide with an average grade of +8.00%. It will be on native material with runoff control by ditches an/or berms. The new portion of road is scheduled to be removed and reclaimed.

GVH-17 - This site is accessed from a short spur road leading from the existing road (which also serves as the OSO pipeline corridor). The GVH-17 road is approximately 400' long, 16' wide and has an average grade of -8.00%. It is on native material with runoff control by ditches and/or berms. This spur road will be removed and reclaimed when no longer used unless otherwise directed by the landowner.

All roads described above are shown on Figure 1-1 of this Appendix.

528 Handling and Disposal of Coal, Excess Spoil, and Coal Mine Waste

No disposal of coal, excess spoil, and coal mine waste will occur at the well sites.

529 Management of Mine Openings

The perimeter of the sites, including the topsoil stockpiles will be fenced with gates on the access roads. The well casing will have a valve that is closed and locked. The valve will also prevent access by animals or other material. Mine openings will be monitored in accordance with Federal and State Regulations.

During the life of the wells, the sites will be inspected as needed by mine personnel to verify the continued operation of the pumping equipment and general site conditions.

530 OPERATIONAL DESIGN CRITERIA AND PLANS

531 General

This section contains the general plans for the construction of sediment controls and general construction and maintenance of the well sites.

The decision to construct each well will be based on the amount of gas encountered during mining. If small amounts of gas are encountered and the mine's ventilation system can dilute the gob gas, no well will be drilled. The proposed well site locations are shown on Figure 1-1.

532 Sediment Control

Sediment control measures for the well sites are described in Sections 732 and 742 of this submittal. Runoff control structures at the well sites have been designed to convey runoff in a non-erosive manner. Sediment yields in the well permit area are minimized by:

- Disturbing the smallest practicable area during the construction of the well site and
- Contemporaneously reclaiming areas suitable for such reclamation.

533 Impoundments

No impoundments will exist at the well sites.

534 Roads

Refer to Section 527 of this submittal.

535 Spoil

No spoil will be generated at the well sites.

536 Coal Mine Waste

No coal mine waste will be stored at the well sites.

537 Regraded Slopes

537.100 Division Approval

No mining or reclamation activities will be conducted in the permit area that requires approval of the Division for alternative specifications or for steep cut slopes.

537.200 Regrading of Settled and Revegetated Fills

Upon completion of the well site, the areas not required for the exhaust blower will be regraded to approximate original contour. Because of the nature of the well site, settling is not anticipated. However, if settlement does occur, these areas will be regraded.

540 RECLAMATION PLAN

541 General

541.100 Commitment

Upon the permanent cessation of gob gas venting, Andalex Resources, inc. permanently reclaim all affected areas in accordance with the R645 regulations and this reclamation plan.

541.200 Surface Coal Mining and Reclamation Activities

Not applicable.

541.300 Underground Coal Mining and Reclamation Activities

Upon completion of the gob gas venting activities the wells will be reclaimed.

541.400 Environmental Protection Performance Standards

The plan presented is designed to meet the requirements of R645-301 and the environmental protection performance standards of the State Program.

542 Narratives, Maps, and Plans

542.100 Reclamation Timetable

A general timetable for the completion of each major step in the reclamation plan is presented in Figure 5-6.

542.200 Plan for Backfilling, Soil Stabilization, Compacting, and Grading

Following completion of the venting activities, the well site will be prepared for contouring and soil distribution. Details regarding topsoil placement and revegetation are provided in Section 242 and Section 353, respectively.

Sedimentation Pond Removal and Interim Sediment Control - See Section 542.500 of this submittal.

542.300 Final Surface Configuration Maps and Cross Sections

The sites will be regraded to the approximate original contour, the contours representing the pre-disturbance topography also represent the reclamation topography. Cross sections representing the final surface configuration will be included upon completion.

542.400 Removal of Temporary Structures

The well sites will not have surface structures.

542.500 Removal of Sedimentation Pond

No sedimentation pond will be constructed at the well sites.

542.600 Roads

The roads which existed prior to the drilling program will be retained after reclamation. The access roads established during the drilling program will be reclaimed after gob gas extraction has been completed. See Section 242 for additional detail concerning the reclamation plan.

542.700 Final Abandonment of Mine Openings and Disposal Areas

All openings will be sealed in accordance with Federal and State Regulations. The casings will be plugged at the bottom to hold concrete. A lean concrete mixture will be poured into the casing until the concrete is within five (5) feet of the surface. At that time the casing will be cut off at ground level and the rest of the casing will be filled with lean concrete. The concrete will be allowed to harden before final reclamation is completed.

542.800 Estimated Cost of Reclamation

Refer to Appendix B of the existing M&RP. It is anticipated that the cost of reclamation of the well sites is adequately covered by the Centennial Project Reclamation Bond. Refer to Chapter 8 for additional detail.

550 RECLAMATION DESIGN CRITERIA AND PLANS

551 Casing and Sealing of Underground Openings

Permanent sealing is described in Section 542.700.

552 Permanent Features

552.100 Small Depressions

No permanent small depressions will be created as part of the well site construction and reclamation.

552.200 Permanent Impoundments

See Section 515.200 of this submittal.

553 Backfilling and Grading

553.100 Disturbed Area Backfilling and Grading

Approximate Original Contour - The well sites will be returned to their approximate original contour after reclamation is completed.

Erosion and Water Pollution - Sediment controls will consist of gouging the surface to create depressions and mounds which store and impede the movement of water. As vegetation becomes established on the reclaimed surface, erosion potential will be further minimized.

Post-Mining Land Use - The disturbed area will be reclaimed in a manner that supports the approved post-mining land use. Refer to Section 411 and 412 for additional detail.

553.200 Spoil and Waste

Spoil - No Spoil will be generated within the well sites.

Coal Processing Waste - No coal processing waste will be generated within the well sites.

553.250 Refuse Piles

No refuse piles will exist at the well sites.

553.300 Exposed Coal Seams, Acid and Toxic Forming Materials and Combustible Materials

No coal seams will be left exposed at the well sites. All wells will be sealed according to Federal and State regulations.

553.400 Cut and Fill Terraces

No cut and fill terraces will be constructed at the well sites.

553.500 Highwall From Previously Mined Areas

No highwalls exist or will be built at the well sites.

553.600 Previously Mined Area

No previously mined areas exist at the well sites.

553.700 Backfilling and Grading - Thin Overburden

No surface mining and reclamation activities involving thin overburden will occur at the well sites.

553.800 Backfilling and Grading - Thick Overburden

No surface mining and reclamation activities involving thick overburden will occur at the well sites.

553.900 Regrading of Settled and Revegetated Rills

If settlement or rills occur at the well sites, they will be regraded and revegetated. Refer to Section 244.300.

560 PERFORMANCE STANDARDS

Performance of the well sites will be conducted in accordance with the approved permit and the requirements of R645-301-510 through R645-301-553.

APPENDIX X

CHAPTER 7

(Revised)
January, 2010

CHAPTER 7
HYDROLOGY

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710 INTRODUCTION

711 General Requirements

This chapter presents a description of the following:

- Proposed operations and the potential impacts to the hydrologic balance;
- Methods of compliance with design criteria and the calculations utilized to show compliance; and
- Applicable hydrologic performance standards.

As-constructed drawings are provided for completed sites in Figures 5-7 through 5-15. Hydrology calculations are provided in Attachment 7-1.

712 Certification

All required maps, plans, and cross sections presented in this chapter have been or will be certified by a qualified, registered professional engineer.

713 Inspection

Inspections are not required since no permanent impoundments will exist at the well sites.

720 ENVIRONMENTAL DESCRIPTION

721 General Requirements

This section presents a description of the pre-mining hydrologic resources within the well pad and their adjacent areas that may be affected or impacted by the proposed coal mining and reclamation operations.

Completed holes are GVH#1, GVH#3, GVH#4, GVH#5, GVH#5A, GVH#6, GVH#7, GVH#7A, GVH#8, GVH#8A, GVH#9, GVH#11, GVH#12, GVH#13 and GVH#14. Surface sites for GVH#15, GVH#16 and GVH#17 have been prepared but the holes have not yet been drilled. The following is a list of holes were approved in 2007, but have not yet been constructed - GVH#10, GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, and GVH#16A.. All holes are shown on Figure 1-1.

Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

Sites for GVH#1 and GVH#5 were reclaimed in October, 2009. All other GVH installations are maintained as a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

722 Cross Sections and Maps

722.100 Location and Extent of Subsurface Water

Section 724 of the approved M&RP provides baseline information. Appendix L of the M&RP includes Surface and Ground Water Inventories.

722.200 Location of Surface Water Bodies

Figures 4 & 5 in the approved M&RP (Appendix L: Surface and Groundwater Hydrologic Inventory) show the locations of the surface-water bodies and existing or pending water rights. Section 724.200 of the approved M&RP provides baseline surface water conditions.

722.300 Locations of Monitoring Stations

Figure 6 and IV-II in the approved M&RP (Appendix L: Surface and Groundwater Hydrologic Inventory) shows the location of surface water and groundwater monitoring stations.

722.400 Locations and Depth of Water Wells

Refer to Section 722.400 of the approved M&RP for information pertaining to the groundwater monitoring wells.

722.500 Surface Topography

Surface topography features at the well sites and adjacent areas are shown on Figure 1-1.

723 Sampling and Analysis

Refer to Section 723 of the approved M&RP.

724 Baseline Information

Refer to Section 724 of the approved M&RP.

724.100 Groundwater Information

Refer to Section 724.100 of the approved M&RP.

724.200 Surface Water Information

Refer to Section 724.200 of the approved M&RP.

724.300 Geologic Information

Geologic information related to the well sites and adjacent areas is presented in Chapter 6 of this submittal and in the approved M&RP.

724.400 Climatological Information

Climatological information is provided in Section 724.400 of the approved M&RP.

724.500 Supplemental Information

Refer to Section 724.500 of the approved M&RP.

724.600 Survey of Renewable Resource Lands

Refer to Section 724.600 of the approved M&RP.

724.700 Alluvial Valley Floor Requirements

Information provided in Appendix L of the M&RP shows this area does not meet requirements for Alluvial Valley Floors.

725 Baseline Cumulative Impact Area Information

The CHIA currently in place for the Centennial Project covers the well sites. The hydrologic and geologic information required for the Division to develop a Cumulative Hydrologic Impact Assessment (CHIA) is presented in the approved M&RP.

726 Modeling

No groundwater or surface water modeling was conducted in support of this submittal

727 Alternative Water Source Information

Not applicable.

728 Probable Hydrologic Consequences

This section addresses the probable hydrologic consequences of construction and reclamation operations at the well sites. Mitigation measures are discussed generally in this section and in detail in Section 730 of the approved M&RP.

728.100 Potential Impacts of Surface and Groundwater

Potential impacts of the well sites in this area on the quality and quantity of surface and groundwater flow may include contamination from materials associated with the drilling of the wells. The potential impact is addressed in Section 728.300 of this submittal.

728.200 Baseline Hydrologic and Geologic Information

Baseline geologic information is presented in Chapter 6 of the approved M&RP. Baseline hydrologic information is presented in Section 724.100 and 724.200 of the approved M&RP.

728.300 PHC Determination

Potential Impacts to the Hydrologic Balance - Potential impacts of the Centennial Project on the hydrologic balance of the well sites and adjacent areas are addressed in the subsections of this submittal and the approved M&RP.

Acid and Toxic Forming Materials - No acid or toxic forming materials have been identified in the soils or strata of the Centennial Project (Chapter 6, Section 623 of this submittal). Additional information is located in Appendix E of the approved M&RP.

Groundwater - During drilling of the wells, the groundwater encountered will be affected. Drilling mud will be used to seal the groundwater aquifers. Once drilling is completed, the casing will be grouted in the well hole. This will seal the aquifers to prevent any groundwater from migrating down the outside of the casing into the mine.

Potential Hydrocarbon Contamination - Hydrocarbon products will not be stored at the well sites, however fuels, greases, and other oils may leak from equipment during drilling operations. Absorbent materials will be used for the collection of leaked fuels, greases, and other oils. The saturated absorbent materials will be disposed of at an appropriate landfill facility.

729 Cumulative Hydrologic Impact Assessment (CHIA)

The Cumulative Hydrologic Impact Assessment currently in place for the Centennial Project includes the well sites and adjacent areas.

730 OPERATION PLAN

731 General Requirements

731.100 Hydrologic - Balance Protection

Groundwater Protection - The effect on groundwater at the well sites is expected to be minimal. Groundwater encountered during drilling will be sealed off, refer to Section 728.300.

Surface Water Protection - To protect the hydrologic balance, construction, maintenance, and reclamation operations will be conducted to handle earth materials and runoff in a manner that prevents, to the extent possible, additional contributions of suspended solids to stream flow outside the permit are, and otherwise prevent water pollution.

During initial drilling, the sites will be graded to ensure that storm runoff will flow towards the berms surrounding the entire drilling pad area. The berms will direct the runoff to the lowest point(s) within the pad area where a silt fence and/or straw bale dike(s) will treat the runoff. The berm placed at the top of the drilling pad cut slopes will divert runoff around the drilling pad. Thus reducing the runoff affected by the drilling pad.

After drilling, the pad size will be reduced for exhausting operations. The pad will be re-graded to cause the storm runoff to sheet flow towards a silt fence and/or straw bale dike. A berm will be placed at the top of the fill slope to direct any runoff from the operational pad to the silt fence and/or straw bale dike. The silt fences and/or straw bale dikes will be periodically inspected, and accumulated sediment will be removed as needed to maintain functionality. The sediment from the silt fence an/or straw bale dikes will be piled on the pad and will be used for fill during final reclamation of the well site. During the drilling phase a berm and silt fence will be installed at the toe of the fill slope to treat any runoff from the drilling pad. During the operational phase there will still be sediment control (silt fence) at the toe of the slope

731.200 Water Monitoring

No water monitoring will be conducted at the degas well sites. Refer to approved M&RP for a description of water monitoring.

731.300 Acid or Toxic Forming Materials

No acid or toxic forming materials are anticipated at the well sites. (see Section 728.300).

731.400 Transfer of Wells

Refer to Section 731.400 of the approved M&RP.

731.500 Discharge

No discharge to underground workings.

731.600 Stream Buffer Zones

Stream Channel Diversions - No stream channel diversions are planned at the well sites.

Buffer Zone Designation - None of the drilling sites are adjacent to a stream, therefore the establishment of a stream buffer zone is not necessary.

731.700 Cross Section and Maps

Not applicable.

731.800 Water Rights and Replacement

Refer to Sections 728.300 and 731.800 of the approved M&RP.

732 Sediment Control Measures

The sediment control measures within the well sites have been designed to prevent additional contributions of sediment to stream flow or to runoff outside the well sites. In addition, the well sites have been designed to minimize erosion to the extent possible.

The structures to be used for runoff control at the well sites are berms, silt fences and/or straw bale dikes. Please refer to the drawings previously provided with this Appendix (5-1, 5-2, 5-3, 5-4 and 5-5), and new As-Constructed drawings 5-7 through 5-15, found at the end of Chapter 5. These drawings show slope and location of sedimentation structures (silt fences, berms).

732.100 Siltation Structures

Berms, silt fences and straw bales dikes will be used to treat runoff.

732.200 Sedimentation Pond

The drilling sites will not have sedimentation ponds.

732.300 Diversions

Refer to Section 731.100 of this submittal.

732.400 Road Drainage

No diversion ditches will be constructed along the roads leading to the well sites. See Figure 5-5 for typical road cross section. Where needed roads accessing the drill sites will have a water bar constructed at the base of the road to divert water off the road prior to the runoff reaching the drill pad. The existing access road up Deadman Canyon to the locations will be equipped with silt fences in the Spring/Summer of 2005 to help control sediment. In addition to the water bars mentioned, 18-24 inch culverts will be installed on this private road and left in place at the owner's request.

733 Impoundments

733.100 General Plans

Not applicable.

733.200 Permanent and Temporary Impoundments

No permanent impoundments will exist at the well sites.

734 Discharge Structures

A berm will surround the entire drill pad at each well site during the drilling phase. The berm will divert undisturbed runoff around the drilling pad and direct runoff from the pad to a silt fence/straw bale dike at the lowest pont within the well pad disturbed area. A silt fence and/or straw bale dike will be the discharge structure for each of the well sites during the operational phase.

735 Disposal of Excess Spoil

There will be no excess spoil generated at the well sites.

736 Coal Mine Waste

There will be no coal mine waste generated or stored at the well sites.

737 Non-Coal Mine Waste

There will be no non-coal mine waste disposal at the well site.

738 Temporary Casing and Sealing of Wells

Refer to Section 542.700 of this submittal.

740 DESIGN CRITERIA AND PLANS

741 General Requirements

This submittal includes general well site plans that incorporate design criteria for the control of drainage.

742 Sediment Control Measures

742.100 General Requirements

Design - Sediment control measures have been formulated to prevent additional contributions of sediment to stream flow or to runoff outside the well site area; and minimize erosion to the extent possible.

Measures and Methods - Sediment control methods will include sit fence, berms, and straw bales to reduce runoff and trap sediment.

742.200 Siltation Structures

General Requirements - Additional contributions of suspended solids and sediment or runoff outside the well site area will be prevented to the extent possible using silt fence, berms, and straw bale dikes. Siltation structures (berms, silt fences and/or straw bale dikes) will be installed before the topsoil is removed from the well site. Construction activities will not occur during major precipitation events.

Design - All hydrology calculations will be made using the 10-year, 24-hour precipitation event. Hydrology calculations are included in Attachment 7-1.

742.300 Diversions

No diversion ditches will be constructed as part of the drilling or operational phases.

742.400 Road Drainage

Refer to Section 732.400 of this submittal.

743 Impoundments

No impoundments will exist at the wells sites.

744 Discharge Structures

No discharge structures have been planned or designed.

745 Disposal of Excess Spoil

There will be no excess spoil generated at the well sites.

746 Coal Mine Waste

746.100 General Requirements

There will be no coal mine waste used at the well sites.

746.200 Refuse Piles

There will be no refuse piles at the well sites.

746.300 Impounding Structures

Refer to Section 733.200 of this submittal.

746.400 Return of Coal Processing Waste to Abandoned Underground Workings

No coal processing waste will be generated at the well sites.

747 Disposal of Non-Coal Mine Waste

All non-coal mine waste will be disposed of at an approved landfill.

748 Casing and Sealing Wells

Refer to Section 542.700 of this submittal.

750 PERFORMANCE STANDARDS

751 Water Quality Standards and Effluent Limitations

Water encountered during drilling and runoff water will be treated using silt fence and/or straw bale dikes prior to leaving the site. Should it become necessary the water encountered during drilling will be pumped into a tank and hauled from the site for disposal at a licensed facility.

752 Sediment Control Measures

All sediment control measures will be located, maintained, constructed and reclaimed according to plans and designs presented in Section 732, 742, and 760 of this submittal.

752.100 Siltation Structures and Diversions

Siltation structures will be located, maintained, constructed and reclaimed according to plans and designs presented in Section 732, 742, and 763 of this submittal.

752.200 Road Drainage

Refer to Section 732.400 of this submittal.

753 Impoundments and Discharge Structures

Refer to Section 733.200 of this submittal.

754 Disposal of Excess Spoil, Coal Mine Waste and Non-Coal Mine Waste

There will be no excess spoil or coal mine waste generated at the well sites. Refer to Section 747 of this submittal regarding non-coal waste disposal.

755 Casing and Sealing

Refer to Section 542.700 of this submittal.

760 RECLAMATION

761 General Requirements

A detailed reclamation plan for the well sites is presented in Section 540. No structures will exist at the well sites.

762 Roads

Refer to Section 542.600.

762.100 Restoring the Natural Drainage Patterns

The natural drainage patterns will be restored after degassification is completed.

762.200 Reshaping Cut and Fill Slopes

Cut and fill slopes will be reshaped at the well sites.

763 Siltation Structures

763.100 Maintenance of Siltation Structures

All siltation structures will be maintained until removed in accordance with the approved reclamation plan.

763.200 Removal of Siltation Structures

When a siltation structure is removed, the land on which the siltation structure was located will be regraded and revegetated in accordance with the reclamation plan presented in Section 540.

764 Structure Removal

A general timetable for the reclamation of the sites is presented in Figure 5-6.

765 Permanent Casing and Sealing of Wells

Refer to Section 542.700 of this submittal.

ATTACHMENT 7-1
HYDROLOGY CALCULATIONS

HYDROLOGY CALCULATIONS

General - The potential runoff for each of the Gob Gas Vent Hole sites is calculated using the 10 year - 24 hour precipitation event of 1.82" and other criteria as described in the approved M.R.P. Section R645-301-512.240.

Runoff and controls for completed sites are based on existing sizes and conditions. Contemporaneously reclaimed areas have been mulched and roughened, seeded, and protected by silt fences as needed, and are therefore considered adequate for runoff protection and control.

Proposed sites are based on the projected original disturbed area size of approximately 1.0 acre, with a length of 200' and a slope of 2%.

Runoff protection and control for all sites is primarily through total containment by berms; however, silt fences are used as needed to provide additional protection below slope areas.

The following is a summary of runoff calculations for the existing as well as the proposed gob gas vent holes, along with controls and treatment of runoff.

GVH Runoff Summary					
Hole	Status	Disturbed Area (ac.)	Peak Flow (cfs)	Runoff Volume (ac. ft.)	Control/Treatment
GVH#1	Site Reclaimed				
GVH#3	Hole Completed	0.55	0.47	0.04	Berm/Containment
GVH#4	Hole Completed	0.45	0.38	0.04	Berm/Containment/Silt Fence
GVH#5	Site reclaimed				
GVH#6	Hole Completed	0.46	0.39	0.04	Berm/Containment
GVH#5A	Hole Completed	0.59	0.50	0.05	Berm/Silt Fence
GVH#7, 7A*	Hole Completed	0.33	0.28	0.03	Berm/Silt Fence
GVH#8	Hole Completed	0.65	0.55	0.05	Silt Fence
GVH#9	Hole Completed	0.81	0.68	0.06	Berm/Containment
GVH#5B	Eliminated	-	-	-	-
GVH#8A	Hole Completed	0.49	0.42	0.04	-
GVH#10	Eliminated				Berm/Containment
GVH#10A	Eliminated				Berm/Containment
GVH#11	Hole Compated	1.0	0.86	0.08	Berm/Containment
GVH#11A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#12	Hole Completed	1.0	0.86	0.08	Berm/Containment
GVH#12A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#13	Hole Completed	1.0	0.86	0.08	Berm/Containment
GVH#13A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#14	Hole Completed	1.0	0.86	0.08	Berm/Containment
GVH#14A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#15	Pad only	1.0	0.86	0.08	Berm/Containment
GVH#15A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#16	Pad only	1.0	0.86	0.08	Berm/Containment
GVH#16A	Proposed	1.0	0.86	0.08	Berm/Containment
GVH#17	Pad only	1.0	0.86	0.08	Berm/Containment

* GVH #7A (re-drill) on existing pad area GVH #7.

Conclusion - Based on an average berm height of 30", the runoff from a 10 year - 24 hour precipitation event can be totally contained on the existing drill pads in an area of approximately 26' x 26', and the runoff from the proposed sites (prior to contemporaneous reclamation) can be totally contained in an area of approximately 37' x 37'. All sites have at least this much area behind the berms for total containment.

APPENDIX X

CHAPTER 8

(Revised)
SEPTEMBER, 2009

CHAPTER 8
BONDING AND INSURANCE

TABLE OF CONTENTS

810 BONDING DEFINITIONS AND DIVERSION RESPONSIBILITIES

This chapter provides information regarding the bonding for reclamation of the completed and proposed gob gas vent hole sites at the Centennial Project. Andalex, Resources, Inc. has on file with the Division a bond payable to the Division for performance of all requirements of the State Program.

Completed holes are GVH#1, GVH#3, GVH#4, GVH#5, GVH#5A, GVH#6, GVH#7, GVH#7A, GVH#8, GVH#8A, and GVH#9. The following is a list of holes were approved in 2007 - GVH#10, GVH#10A, GVH#11, GVH#11A, GVH#12, GVH#12A, GVH#13, GVH#13A, GVH#14. GVH#14A, GVH#15, GVH#15A, GVH#16, GVH#16A and GVH#17. All holes are shown on Figure 1-1.

HISTORICAL BACKGROUND:

Five holes were initially approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

Due to required changes in the mining plan, hole GVH#5B was not drilled and has been shown as eliminated, although the site has been approved and included in the bonding.

On May 11, 2007, the following holes were approved - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

On June 11, 2008, the company received approval of the R2P2 from BLM to temporarily seal up the mine in response to economic issues prevailing at the time. GVH#10 was never completed because the longwall panel #10 was foreshortened from original projections. GVH#11, GVH#12, GVH#13, and GVH#14 were drilled and cased to total depth. At the sites of GVH#15, GVH#16 and GVH#17 the pads were prepared on the surface but the holes have not yet been drilled due to the temporary mine closure.

On February 14, 2006 the company signed an operating agreement with Oso Energy Resources Corp., wherein Oso was granted the right to tap into certain GVH wells for the purpose of commercial use of the methane gas being liberated from the holes. Oso has acquired all the necessary gas rights from the legal mineral owners associated with the properties involved. A copy of the Oso operating agreement is included as Attachment 1-1. The Oso agreement applies to all the GVH sites with the exception of GHV#1 and GVH#5 which were omitted because of property boundary and gas ownership ambiguities. Since the signing of the operating agreement, Oso has installed a compressor station (adjacent to GVH#9), and has extended the collection lines to all GVH sites (other than GVH#1 and 5). Oso is currently taking gas delivery from the GVH system and is delivering it to the local commercial pipeline. Because the GVH holes continue to produce methane even after the longwall panel area worked out and/or sealed up, the term of the Oso agreement is not tied to the active status of the mine.

Because GVH#1 and GVH#5 were never included in the Oso agreement, and these holes were not considered necessary for future ventilation of the mine operation, it was subsequently determined that these sites should be reclaimed in accordance with the stipulations of this (approved) plan. Therefore, in the autumn of 2009, these holes were plugged as per BLM guidelines, and the surface pads were reclaimed. All other GVH installations are maintained as a vital and integral component of the overall mine ventilation system and will remain in a stand-by status until such time as the mine resumes operation.

820 REQUIREMENTS TO FILE A BOND

A description of the disturbed area location for each well site is found in Chapter 1, Table 1-1. Reclamation of the disturbed areas are discussed in Section 340 of this submittal. The performance bond period is for the duration of coal mining and reclamation operations including the extended period designated by the Division. The bond is in the form of a surety bond and is described in Section 860 of the M&RP.

830 DETERMINATION OF BOND AMOUNT

The existing reclamation bond is posted in the amount of $1,296,000.00. It has been determined that the total bonding amount for each additional GVH will be $28,000 per hole. Additional bonding of $224,000 has been secured for the 8 primary sites (GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17). Bonding will

be in place for each site prior to any surface disturbing activities. GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, and GVH#16A presently do not have bonding in place. These holes are conditionally approved and will not be constructed until additional bonding has been posted. These holes are alternates to be constructed in the unlikely event that one of the primary holes fails for some reason or if additional holes are needed for safety of the miners.

840 GENERAL TERMS AND CONDITIONS OF THE BOND

Refer to Chapter 8 and Appendix B of the approved M&RP.

850 BONDING REQUIREMENTS FOR UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES

Refer to Chapter 8 of the approved M&RP.

860 FORMS OF BONDS

Refer to Chapter 8 of the approved M&RP.

870 REPLACEMENT BONDS

Refer to Chapter 8 of the approved M&RP.

880 REQUIREMENTS TO RELEASE PERFORMANCE BONDS

The applicant will comply with the requirements described in Section R645-301-880 of the Division regulations when applying for the release of performance bonds.

890 TERMS AND CONDITIONS FOR LIABILITY INSURANCE

Certificates of insurance issued for the Centennial Project are included in Appendix B of the approved M&RP.

APPENDIX X

FIGURE 1-1

PERMIT BOUNDARY

RECEIVED
JAN 28 2010
DIV. OF OIL, GAS & MINING

MATHIS LAND, INC.

MATHIS LAND, INC.

DAVE R. & MILDRED CAVE, et al.

F. & G. SHIMMIN

REMONUMENTED SECTION CORNER (BLM)

GVH 16A
GVH 15A
GVH 14A
GVH 13A
GVH 12A
GVH 11A
GVH 17 (PAD ONLY)
GVH 16 (PAD ONLY)
GVH 15 (PAD ONLY)
GVH 14
GVH 13
GVH 12
GVH 11
GVH 10 (ELIMINATED)
PANEL 10

OSO COMPRESSOR STATION
GVH 9
GVH 8A
GVH 8
GVH 7
GVH 7A
GVH 6
GVH 5A
GVH 5 (RECLAIMED)
PANEL 7

Aspen/Grass Reference Area

PANEL 6
GVH 4
GVH 3
Sagebrush/Grass Reference Area

GVH1 (RECLAIMED)

OSO GAS WELL PAD AND PIPELINE (11.92 ACRES - NOT IN PERMIT AREA)

PANEL 5

MATHIS LAND, INC.

PANEL 4

UNITED STATES

DAVE R. & MILDRED CAVE, et al.

PANEL 3

I CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

UTAH REGISTERED #6449561 David W. Hibbs PROFESSIONAL ENGINEER 1/22/10

LEGEND

- CURRENT GVH LOCATIONS
- PROPOSED GVH LOCATIONS (Primary)
- PROPOSED GVH LOCATIONS (Alternate)
- RECLAIMED GVH SITE
- OSO PIPELINE CORRIDOR (APPROXIMATE LOCATION)
- EXISTING ROADS
- NEWLY CONSTRUCTED ROADS
- SURFACE OWNERSHIP BOUNDARY
- ANDALEX PERMIT BOUNDARY
- VEGETATION REFERENCE AREAS

GVH LOCATIONS MAP

CENTENNIAL PROJECT

ANDALEX RESOURCES, INC.
6750 AIRPORT ROAD
PRICE, UTAH 84501

MSHA MINE ID #42-02028

DRAWN BY	PJ	SCALE	1" = 1000'
APPROVED BY	DS	DATE	29 SEPT. 2009

FIGURE 1-1

G:\Current Drawings\Buildings & Construction\Tower Mine\GVH Drawings\Figure 1 9-22-09.dwg, 11x17, 1/22/2010 10:08:15 AM